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TREATISE ON THE MILITARY BAND

By

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PREFACE

This Treatise has been written with the object of providing for students—both military and civil—of the Military Band musical world, an up-to-date and comprehensive course.

The paucity of Military Band instructional literature on modern lines has been a matter of some concern to me. My aim in the compilation of this work has been, both to make up in some degree for this scarcity, and to combine in one treatise a thorough guide to the three most important aspects of this very intricate subject, viz. :—

- 1st. The Individual Instruments of the Military Band.
- 2nd. Arranging for the Military Band from all Musical Media.
- 3rd. The Training and Conducting of a Military Band.

Particular attention has been paid to the historical side of the evolution of the Military Band and its instruments.

A warning has been given to the embryo arranger, of some of the numerous stumbling blocks he will encounter ; for example, the treatment of various idioms found in works for the pianoforte.

An endeavour has been made to help the amateur conductor to avoid crude errors in style.

I have tried to make this book essentially practical, useful alike for study and for reference, and I hope that it will prove to be an asset to both teacher and pupil.

I wish to thank my many friends for advice and help in the correction of proof sheets, which work has been found to be very exacting. Particularly would I thank :—

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Major J. L. Judd, M.B.E., Mus. Bac., F.T.C.L., L.R.A.M., A.R.C.M.,
Director of Music, Royal Signals Band.

Bandmaster A. J. Allen, A.R.C.M.,

who by their invaluable aid and suggestions have so ably contributed to the success of this book.

My thanks are also due to the Professors and Students of the Royal Military School of Music who have so willingly given me their assistance, and especially to Mr. George Savage, L.R.A.M., A.R.C.M., for his great assistance in dealing with the notes and charts on the modern Horn.

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May, 1931.

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Acknowledgments

to

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THE EVOLUTION OF THE MILITARY BAND

Since the beginning of recorded history, music of some kind has played a major part in the lives and affairs of mankind.

In all nations, from the earliest times, music has been the accompaniment to feats of arms, serving the twofold purpose of inspiring the troops to fight, and as a method of conveying orders and commands. It was used, in time of battle, as a means of exciting that passion which the most eloquent oration would fail to inspire.

The term "Music" is, however, applied with reserve, implying only that sounds were produced by the use of implements which are the natural precursors of our musical instruments.

As the development of bands has followed the development of instruments closely, it is necessary here to touch on the evolution of our modern instruments.

The earliest instruments of which we have record are the Harp and Flute (Genesis, Chapter iv, where Jubal, son of Lamech, is mentioned as the Father of all such as handled the Harp and *Organ).

Reference to Drums also is found in the earliest records.

In various forms, simple and ornate, the Drum has been used throughout the ages by all savage tribes and races for their religious and war-like ceremonies. Not only have the savage races used it, but the civilised races also, for it is well known that since wars were fought between nations, the Drum has always played a part in the pomp and ceremonial that went with war in those days. Even to-day, Drums are used in the British Army for drill purposes, apart from their use in the Band. Also in many savage countries the Drums used to-day are identical with those used many hundred of years ago. In parts of Africa, Drums are used as a means of sending messages from one village to another; this is known as "Grapevine Telegraphy".

Among cannibal tribes, human skins have been used as drum heads; specimens of such drums are to be seen in the museum at Kneller Hall.

The earliest reed instrument is the Flute. We first see it really mentioned as such in the Old Testament* (1st Book of Samuel, Chapter x, verse 5), where there is mention of a "company of Prophets coming down from the high place with a psaltery, and a tabret, and a pipe, and a harp before them". There is also a reference in the Book of Daniel, Chapter iii, verse 5, where it is definitely mentioned as Flute.

It is interesting to observe in the Chapter from Daniel mentioned above, the words "Ye hear the sounds of the cornet, flute, harp, sackbut, psaltry, dulcimer, and all kinds of musick".

This Flute is said to have been made from reed, bone, wood, or horns of animals.

*When originally translated, from the Hebrew, the word Organ should have read Flute, as the interpretation given is obviously wrong.

This dates us back to the time of the Babylonians, but it is an undoubted fact that the Flute was used by the ancient Egyptians in the time of the Pharaohs many centuries before. Illustrations of Flutes are to be seen on the Pyramids of Gizeh and Memphis, and other tombs.

“Pan’s Pipes” were also derived from the original Flute pipe. They consisted of several reeds strung together, and were extensively used by the Hebrews, Greeks, and Romans.

An interesting legend gives an ingenious explanation of the way in which it was discovered possible to produce a musical sound from a hollow tube; it reads as follows.

A young Egyptian maiden, of very ancient times, while sitting idly ruminating on the banks of the Nile beside a large mass of bullrushes, suddenly heard curious sounds issuing from the reeds, which she, rather fearfully, attributed to some form of witchcraft.

Being very alarmed, she ran away as fast as her legs would carry her back to her home, where she related her story.

The resulting gossip reached the ears of one of the wise men of Egypt, who investigated the truth of the tales which had come to his ears.

After a certain amount of watching and listening at the same spot where the maiden had sat, it was discovered that these sounds only occurred when a breeze was blowing, and that such sounds came from the tops of broken rushes which of course left a hollow tube exposed to the breeze, thereby producing a similar effect to that of blowing across the hole in a hollow door key, or the aperture of a bicycle pump, or in fact any other hollow tube.

Some of the sounds heard by the wise men were in many cases ethereal and beautiful, as the canes being broken off, obviously in different lengths, would naturally give sounds of varying pitch, so that both discordant and beautiful harmonic effects were produced.

There seems to be no doubt, even if the above legend cannot be substantiated, that the Pipes of Pan were evolved in some such manner.

Later we hear of pieces of wood of definite length, with holes pierced in them. This was followed by the really useful invention of adding keys to the instrument, thus facilitating the production of semi-tones.

These instruments were developed along several lines, and we have the slightly different type of instrument evolved, which was known as Hautbois, Schalmey, Chalmeau, and various other names—these now correspond to our modern Oboe. The Hautbois or Oboe is recorded as having been used in the following countries before its use in Europe—Hindustan, China, Arabia, parts of Africa, and ancient America. Old pictures prove that a crude form of Oboe was used by the Romans, and this has also been seen in the paintings and sculpture of ancient Egypt. The Oboe was definitely in use in England during the reign of Edward III (1312-77). It was then known by the name of “Weaght”, the king having three weaghts in his private band. The origin of the name weaght lies in the fact that the night watchman or “castle weaght” had to carry a very

crude form of Hautbois on his rounds. In the fifteenth century, the Hautbois formed the nucleus of the bands of the period, probably owing to the intensity of tone, and its carrying power.

Even to this day, in some parts of Germany, the word Oboist means a Military Bandsman, and Oboe-Meister a Military Bandmaster.

In China, at the present time, the native musicians use an instrument exactly similar to the primitive Oboe or Hautbois. The tone is excruciating.

From this family of instruments also, came the Clarinet and Bassoon. The origin of the Bassoon is the Bass-Pommer, although under the name of Bombos, it was used by the ancient Greeks. This instrument, as we know it to-day, has been evolved more by gradual improvement than by sudden invention. It is still the most imperfect of our instruments.

Brass instruments, in a similar way to the Reed, have been derived from what might be called a common ancestor, namely, the Horn.

The history of the Horn is almost identical with that of the Trumpet and Sackbut (Trombone) for the first part of their existence. There has been gradual improvement similar to the Bassoon, rather than any influx of inventiveness.

Paintings and plates which are to be seen at the British Museum go to prove that these instruments in their very crude form were in use at the time of Moses. It is possible to see illustrations of their use 2,000 years ago. At that time these instruments were all called Trumpets, but that does not mean the Trumpet as used to-day.

They were made of tortoise shell, thigh bones of animals, bark of trees, horns of animals, ivory tusks, etc. These instruments were highly coloured, decorated and carved. Sometimes they were covered with leather or painted and etched in the most flowery style.

In the German translation of the Bible by Luther, he interprets the "Keren" as the "Trompete" and the "Khatsotsrat" as the trombone (the latter, in this case, being merely a tube, probably a little longer than the trumpet).

The antiquity of these instruments can be gauged from the fact that in the History of the Jews by Josephus, mention is made of David, who commanded that 200,000 silver trumpets should be ordered for the use of the Israelites; these instruments to be made after the style invented by Moses. The army of the Israelites used these trumpets for their military ceremonies and displays; in the Book of Joshua, Chapter vi, the Trumpet, and the sound of Rams' Horns, are freely mentioned throughout in dealing with the capture of Jericho by the Children of Israel.

Later, the horn was used as a signal for war, each commander having his "Horn Master". In mediaeval times, the reward for valour was a horn or bugle.

From the foregoing can be seen the number of uses to which these ancient instruments have been put. As time went on, however, these instruments from being all of the same family character, became separated

into individual instruments, with their own peculiar characteristics, developing into the Horn, Trumpets, and Trombone, etc.

References to a Military Band, or at least to instrumentalists performing at Military evolutions, can be found in records dating back to the pre-Christian* era. A good example of this being at the siege of Jericho by the Children of Israel, when, to quote the Bible, "the armed men went forth led by the priests who blew on trumpets".

This example, and the example from the book of Daniel, Chapter iii, both go to prove that even apart from a musical combination heading a Military formation, it was customary to lead even religious processions in this manner.

It must be understood, however, that no fixed combination of instruments was used in early times, but from various records it seems that Flutes, Trumpets, and Drums, were the usual complement of the "band", used either singly or in combination. It is fairly certain, however, that the efforts of these musicians were directed solely to producing the greatest possible noise, and it is extremely doubtful whether any musical effects were produced or even desired.

In Greece, in the early days of the Christian Church, it is placed on record that numbers of instruments played together. This was probably the first attempt at forming a Band. These primitive instruments were used principally to accompany singers, although from the records we possess, it would appear that they merely played the same notes as sung.

Before the twelfth century, popular music was in the hands of roving musicians, known as Troubadors, who were outside the pale of the law, and could not take part in any Christian Sacrament. This was caused through the attraction of their free and lawless existence, which brought many followers, and caused severe edicts to be made against them.

These wandering musicians preserved for us many old melodies which would otherwise have been lost. They rarely played together as a band, except on special occasions such as fetes or festivals.

Trumpets and kettle drums were used exclusively by nobles and Princes. It is on record that the band of King Henry VII consisted of fourteen Trumpeters, ten Trombones, four Drums, two Viols, three Rebecs (stringed instruments with three gut strings tuned A,D,G, and played with a bow), one Bagpipe, and four Tambourines.

In 1587 Queen Elizabeth's band included ten Trumpets and six Trombones.

The term "Band" was not used until the nineteenth century.

The Military Band proper was first introduced into England from Germany. But, prior to this, we have record of the Royal Artillery having a number of men who were trained as musicians, and also in the Guards, where in 1662, we are told that the Band of the Scots Guards consisted, in common with other Regimental Bands of the period, of Drums, Fifes, and Bagpipes. Bands in Regiments were not officially recognised at that

*By the pre-Christian era, is meant before the birth of Christ.

period. Any that then existed were maintained entirely by their own officers. The members of these Bands were often coloured men, especially the Drummers. Units competed with one another in the splendour of the uniform of their Bands, and in the number of men in them, but no effort was made to co-ordinate the pitch of the instruments of the various Bands, with the result that there was chaos, and British Army Bands compared most unfavourably with the Bands on the Continent, which had reached a fairly high state of efficiency.

In the latter half of the seventeenth century, progress was very marked under the influence of Louis XIV of France (1643-1715), who employed Lully to organise his Bands and to compose music for them.

Charles II, during his exile in France, was struck by the Band of Hautbois there. When, in 1660, he returned to England, he introduced these Hautbois into the Horse Grenadier Guards. This was popular, and in 1685 a Warrant was issued by the King "Authorising the entertainment of twelve Hautbois in the King's Regiments of Foot Guards, and that a fictitious name shall be borne on the strength of each of the other companies quartered in the Country, with a view to granting these musicians extra pay".

Of the development of this Band of Hautbois, W. T. Parke, in his "Musical Memoirs", says "The Bands of the three Regiments of Guards consisted, in 1783, of only eight performers—two Oboes, two Clarinets, two Horns, and two Bassoons. They were excellent performers on their instruments, and were paid by the month, being well paid. They were not attested, and only played from the parade at the Horse Guards to St. James' Palace while the King's Guard was mounted, and back again from there to the Horse Guards. Lord Cathcart, an officer of the Coldstreams, desired the Band to play during an aquatic excursion to Greenwich. This the musicians deemed to be incompatible with their respectable musical engagements, and they declined to do it. The officers, who had to subscribe, and were responsible for, the pay of the Band, became desirous of having a Band which they could command on all occasions, and a letter to that effect was written to the Duke of York, Colonel in Chief of the Regiment. The Duke, who was at that time in Hanover, consented to the wish of his officers, and with the approval of the King, a Band of a much larger number than hitherto employed, and composed entirely of Germans, was sent over. It consisted of twenty-four members and included Clarinets, Horns, Oboes, Bassoons, Trumpets, Trombones, and Serpents, while three Black men were employed to beat Tambourines and carry Crescents."

This was the forerunner of our present Military Bands, and was in fact, the same kind of Band as used in Germany at that time. It may be of interest to trace the development of that type of combination in Germany.

The idea originated from the Jannisaries, part of the Turkish Army. Each corps of Jannisaries had a Band which consisted of three or more "Zarnas", two or more instruments of the same kind but pitched an

octave lower, and one or more Fifes. The "Zarna" was an instrument similar to the Hautbois, but blown by means of a peculiar cup mouth piece, in which was enclosed a small but very hard reed. This, when blown, produced a penetrating and far sounding note. These, with the Fifes, were the melody instruments. They played in unison or octaves, and produced a most piercing squeal. The accompaniment consisted of one large Kettle Drum, two small ones, three or more Drums similar to our Tenor Drums, and one big Bass Drum (one side of which was beaten with a heavy felt-headed stick, and the other side with a kind of broom, sounding the unaccented beats of the time), one pair of very large Cymbals, two pairs of small ones, and several Triangles. The effect of this combination is impossible to imagine. It must be heard to be understood, because the sound must have been barbarous. This Band was stationed near the tent of the Pasha in charge of the Jannisaries, and while they were in battle, played continuously to stimulate the combatants.

The Western Princes observed this custom, and admired the picturesque appearance of the turbanned orientals. To gain the favour of Frederick II of Prussia and the Elector of Hanover, the Sultan presented them with a complete Band of this description. These Bands, however, were soon depleted by death and other casualties, and the oriental instruments were gradually replaced by home made ones. Hautbois took the place of Zarnas, Bassoons the place of the big Zarnas, while Horns and Trumpets were added, and the Kettle Drum discarded; but those instruments of percussion which had previously been unknown in European Bands—Bass Drum, Cymbals, Triangles, and Crescent, kept their place. For a long time it was the custom to have these instruments played by negroes, dressed in resplendent uniforms. The Crescent lost a lot of its simplicity and dignity when it was decked out in all sorts of little bells, stars and the like, to give it a smart appearance. It was in this state that it was introduced to the British Army, where it was immediately and irreverently christened "Jingling Johnny".

"Jingling Johnny" was the precursor of the more up-to-date upright Glockenspiel, which was shaped like the ancient lyre, from the curved ends of which hung tufts of bright hair. The metal bars, which were struck by a small hammer, were between the arms of the lyre. The whole was carried by means of a short pole and a sling around the waist of the performer.

It would seem as though persons responsible for the formation of some of our Bands, were keen admirers of the Janissarie music of the Turkish Army, where predominance of shrill tones, and the clangorous reverberations of gongs, cymbals, and other percussion effects were keenly relished.

The pernicious custom of attaching one cymbal to the Bass Drum, to be struck by its fellow in the left hand of the Bass Drummer, is obviously an inheritance from this type of music, and has nothing to commend it.

On the contrary it is retrogressive, and links us with the savage rhythmic impulse of a progressive but primitive era.

To revert now to the Duke of York, and his introduction of the German Band into England.

The innovation met with almost universal approval, and Regiments of the line were allowed by War Office to raise similar Bands at their own expense. They allowed a certain number of men from the ranks to be trained as musicians, but ordered that all expense for the purchase of music, instruments, etc., and for the pay of the Bandmaster or professional instructor, should be borne by the officers. Many notable Bands were formed in this manner, through the rivalry between the officers of different Regiments. Highly skilled foreign musicians were engaged as Bandmasters, and instrumentalists, and the best instruments procurable at that time were bought.

The Napoleonic wars with France show numerous records of the important part played by the Regimental Bands in action. One reference to the Battle of Salamanca says that the 32nd Regiment of Foot were able to recapture their Bass Drum, which had been lost to the enemy at the Battle of Corunna.

Thus it is proved that Bands of that period were taken actually into the line of action, but as musicians and not as fighting men.

The period of peace which followed the Napoleonic wars gave the British Army ample leisure to develop its taste for Military music. No sooner had the war fever subsided, than attention was immediately directed to Regimental Bands.

Our crack Regiments, now at the zenith of their extravagance in musical matters, spent enormous sums on their Bands, for the rivalry between Regiments was exceptionally keen.

It must be understood, however, that the entire welfare of the Bands depended on the enthusiasm and pocket of the officers of the Regiments. It has been said that this system, where the Bands were maintained by the officers, was more beneficial to Military music than that in vogue now.

This may be, but it is certain that it took the official recognition of Bands to create the highly efficient organization that is seen and heard to-day; because, despite the keen rivalry between Bands, there was still the same confusion of pitch and organization until the War Office in 1857 realised the necessity for co-ordinating the Bands of the Army, and for that reason established Kneller Hall.

The necessary stimulus for this came about through an incident that would make the modern Military Bandmaster shudder.

At Scutari, in 1854, the British troops comprising the Army of the east destined for the Crimea, held a grand review on the birthday of Queen Victoria. There were some sixteen thousand men on parade, and whilst their appearance and marching were perfect, what a tragedy occurred when the massed Bands struck up God Save the Queen! Not only was the National Anthem scored in different ways, but it was pitched in different keys in addition; and all this before the military attaches and staffs of the allied armies. No wonder that a staff officer wrote afterwards that "it rather spoilt the effect of the review".

The British officers must have realised for the first time what an amount of money they had been paying for very indifferent music.

This debacle was a blessing in disguise, it exposed the necessity for the standardization of Bands, and stirred into action men who had the welfare of the Military Band at heart, and whose qualifications gave them the right to demand reforms.

Greatly impressed by the disastrous state of affairs was James Smyth, Bandmaster of the Royal Artillery, who, in the company of Henry Schallehn, a former Bandmaster of the Seventeenth Lancers, approached the Secretary of State for War on the subject, but with rather doubtful success ; officialdom still regarded Military Bands as a luxury.

Schallehn, however, had the good fortune to have the patronage of the new Commander in Chief, the Duke of Cambridge, under whom he had served in the Seventeenth Lancers.

H.R.H. needed very little prompting concerning the state of our Military Bands, as he had campaigned in the Crimea and was present at the Scutari fiasco.

He at once took the matter in hand personally and, aided by the practical advice on training and education of Smyth and Schallehn, suggested the formation of a Military School of Music, to be provided by the Government but kept up at the expense of the Regiments of the Army. The scheme was agreed upon and took practical form in the establishment of a " Military Music Class " at Kneller Hall on March 3rd, 1857.

This was the inception of the Royal Military School of Music, established to train Bandmasters for appointment to Regiments of the British Army. It was also meant to stimulate the acquisition of musical knowledge amongst our own countrymen, by training young men and boys as competent instrumentalists for the various Regimental Bands, and by holding out to them, if they improved and developed sufficient talent, a prospect of obtaining remunerative employment as Bandmasters.

The immediate effect of these improvements was to raise the status of Military Bands considerably. Composers for the first time got a conception of the capabilities of this hitherto despised branch of musical art, and open air music was lifted into a superior position.

As its name implies, the Military Band was originally a group of musicians, employed by Military people for Military functions. But with its newly created importance the name referred to a set combination of wind instruments both reed and brass, together with percussion.

Military Bands sprang up all over the country ; towns and villages, large manufacturing firms, and other organizations such as the Police Force and the Fire Brigade, all had their Military Bands though none of the performers were Military men. The combination however retained its original name, obviously because of its Military origin.

The Military Bands of our towns and villages were nondescript organizations, being, more often than not, the manifestation of goodwill towards music on the part of certain members of the community, but just

as frequently they were exhibitions of the inefficacy of goodwill without proper direction.

However, a marked improvement was shown in the musical outlook of the general public, and the Military Band became an established and recognised art factor.

But time waits for no man, and evolution proceeds at a remarkable pace.

This was equally applicable to the Military Band as to any other subject, so that despite the numerous improvements made, more were constantly sought.

Early in the twentieth century, great discrepancies existed in the number and variety of instruments used by the different Bands, thus handicapping the arrangers and, in consequence, limiting the scope of the Bands themselves.

In the year 1921, the Commandant of Kneller Hall called a conference of the Directors of Music to the Army, Navy, and Air Force, so that the question of the instrumentation of the Military Band could be discussed and standardized by competent authorities.

The outcome of that conference is effective to the present day; established order is now to be found in all Government Military Bands, and, in a lesser degree, in the civilian Military Bands also. If we take a survey of the usage in different countries, we will find wide divergencies. This is dealt with by the Author in the Chapter "Foreign Military Bands"

Rapid strides were made from then onwards; a few composers realised its possibilities and wrote music especially for its use, so that to-day, the Military Band is a highly trained and efficient organization, whose capabilities, as the author has so frequently demonstrated, are practically inexhaustible.

The proof of this lies to a great extent in the hands of contemporary composers.

If only they can be brought to consider seriously the Military Band, and, recognizing its potentialities as an art factor, be induced to write works suited to its genus; taking into account its remarkable variety of voicing, and its infinite shades of tone colour, then only will the efforts of the numerous pioneers of the Military Band have been honoured.

The Royal Military School of Music, Kneller Hall, Twickenham, celebrates its Centenary (1857-1957) and in addition to training Bandmasters of the British Army, it now has several students under training throughout the world.

CARE AND MAINTENANCE OF BAND INSTRUMENTS

This chapter is written with the object of assisting Bandmasters and Bandsmen to take proper care of their instruments, which not only saves the Band Funds undue expense, but improves the intonation of the Band itself, and safeguards the health of the individual Bandsman.

GENERAL

Immediately after use *Reed* instruments should be thoroughly dried, mouthpieces rinsed in a solution of Condyl's Fluid and wiped dry, the reed should be wiped clean, or, in the case of the Oboe and Bassoon, cleaned with a small feather while damp. Keywork should be wiped over to remove perspiration, which in time will corrode any metal.

With *Brass*, valves and valve casing should be dried, slides emptied of excess moisture, and mouthpieces rinsed in Condyl's Fluid.

Drum skins and snares should be loosened, and springs on the damper action of Bells, Vibraphones, etc., released.

String instruments should be wiped to remove surplus resin, and bows should be unscrewed.

REED

The mechanism on any instruments should be dismantled as little as possible, and seldom (if ever) for the purpose of cleaning. To clean the bore of Flutes, Oboes, Clarinets and Bassoons, a cotton mop, or pull-through of silk or soft flannel, pulled through from the small end of the bore to prevent it from becoming wedged, will suffice. A slight dressing of linseed oil should be applied after cleaning, care being taken to avoid oiling the pads of keys.

For exterior cleaning, a soft brush should be used to remove dust under keywork, the burnt end of a match will remove coagulated grease and dirt from springs, etc., and finger holes should be cleaned with a soft pipe cleaner and methylated spirit.

A heavy dressing or bath of linseed oil annually or half-yearly is recommended for the preservation of wooden instruments. When this is done all keys must be stripped to ensure that no oil touches the pads. Care must be taken to dry the instruments thoroughly before reassembling. Springs and rods should be sparingly oiled with light *mineral* lubricating oil, i.e., cycle oil or motor engine lubricating oil. Screws should be slightly loosened and a drop of oil placed on the screw head to ensure that screws work freely. Olive oil should never be used as it contains a high percentage of moisture, is sticky, and attracts dust, which tends to clog light mechanism, and will eventually encourage rust.

The small vents in Bassoon crook and Oboe keywork should be cleaned with a sharpened match. A pin or similar article "waggled" round the hole will enlarge it and cause bad intonation.

THE TREATMENT OF A BASSOON REED

1. *In the case of a reed being too hard*, the player can close the blades of the reed by slightly flattening the wire nearest the blade. Another method is to shave from the middle of the reed towards the blade of the reed with a razor-blade or a sharp pen-knife. *But this must be the last resort.* On no account should the wire farthest away from the blade be tampered with, as this affects the bore of the reed, and causes leakage when it is put on the crook of the instrument.

2. *If the reed is too soft*, two methods can be used. Firstly, by opening the blades. This could be done by pressing the sides of the wire nearest the blade. Secondly by cutting a minute fraction off the blade of the reed, ensuring that the reed is placed on a piece of glass or any other smooth but hard surface. *This again must be the last resort.*

3. Special attention should be brought to bear on the cleanliness of the reed, by using pipe-cleaners which are inserted at the bore and passed through the blade. Very small feathers are also useful for this, but special care must be exercised, as they may cause the reed to split down the centre. The fitting of the reed on to the Crook is very important—the player should ensure that the reed fits tightly to avoid leakage.

Bassoon and Cor Anglais crooks should be soaked frequently in warm soda water and afterwards pulled through with a piece of silk attached by thread to a piece of old 'Cello string, remembering to insert the string in the smallest end of the crook. Chromium should be rubbed with vaseline, particularly round crevices and parts where the surface may be broken.

Care should be taken to always replace hard or damaged corks, pads and lapping as soon as possible. In addition to keeping key actions noiseless, cork has an important function in the balance of keys, controlling the height a pad rises above its vent. As a general rule, the smaller the hole the less the pad should rise, just sufficient vent to give a true note. Thus it will be found that keys near to the mouthpiece rise less than those near the bell. Keys which work together should be equally balanced. Care should be taken to keep the pads soft and free from oil or excess moisture, or the skin will shrivel and become hard and uneven, and of course will leak. To test for leaks, stop one end of pipe and close all holes, blow cigarette smoke through, and even if no smoke can be seen escaping, a small brown nicotine stain on a pad will show where the trouble lies.

Ebonite is a rubber composition and liable to perish, it should be kept free from oil and is best cleaned with chamois leather. Lapping should be kept firm but not tight, and greased with vaseline, the socket into which the lapped joints are fitted should be frequently cleaned and greased. As far as possible sheet cork should be used for lapping. It should be fixed with Shellac which resists the action of moisture. Failing this prepared linen lapping may be used, but care should be taken to wind evenly and avoid any rocking when the joint is finished.

Shellac, either solid or liquid should be used for all corks and pads, ordinary glues are sensitive to moisture and after a spell of dry hot weather

pads and corks will drop off. Reed covers should be kept clean and disinfected. Finally, cases should be brushed out frequently and the outside rubbed with oil or polish to preserve the leather or cloth.

BRASS

The outside of silver instruments can be easily cleaned with warm soapy water. For Brass instruments use polish which does not contain Vitriol or other strong acid. Not only does a strong polish wear the brass, but more important still, the residue, if left round the numerous joints and stays, rots the solder, and pieces of tubing, and slides, etc., commence to leak and fall away.

The utmost care must be taken in the cleaning of valves. The walls of the passages through a valve are extremely thin and should not be scraped or prodded with any hard substance. Valves should not be polished bright, a few hours soaking in a cup of common lemon juice and then warm soda water, will remove the most stubborn deposit of verdigris. A piece of soft cloth and small sponge are all that should be used on a valve. The inside of the valve casing should be carefully cleaned, particularly the $\frac{1}{8}$ " or so at the bottom, where metallic particles are pushed down by the valve. If this is left to form a deposit and corrode, it will soon produce a sticky valve action. The screw caps at each end should be kept bright and clean, the threads cleaned and greased, and the spiral springs oiled. Valves and slides that have become loose through cleaning or unfair wear will leak and cause a "fuzzy" tone, they should be plated and refitted. Slides should be firm but greased and easy to remove, before new grease is applied, the old dirty grease should be removed, and the slide wiped clean. Valve corks have a most important function, not only do they obviate noise, but are fitted to make the openings of the valve passages coincide exactly with the openings of the adjacent slides and compensating tubing. Too large or too small a cork results in a small elliptical aperture instead of the correct circle, causing a "wheezy" tone, and sharp notes, particularly when two or more valves are used in combination. To test for leaks remove all slides and test each length of tubing in turn with smoke. In the case of Trombones, remove the bell and mouthpiece, close both ends of the slide and try to throw off the outer slide. If it leaks it will drop off, but a good slide will spring back to the closed position.

Care should be taken to depress the corresponding valve before removing a slide, otherwise in pulling out the slide a partial vacuum is produced and air escaping down between the valve and the outer casing will eventually cause a strain and leak. The whole tubing should frequently be flushed through with a solution of Cond's Fluid, and periodically a little rabbit shot should be used to break the lining of residue which forms inside the smaller tubing, once loosened in this way it may be easily washed out. This should be used in conjunction with hot soda water.

Care should be taken to see the mouthpieces, shanks of Cornets, French Horn Crooks, and the mouthpiece pipe of Basses, etc., are kept free of this noxious lining, a piece of frayed Bass String or small wire

brush will answer the purpose. The bow of the outer Trombone slide quickly collects filth, pushed down by the stockings on the inner slide, which should be removed frequently with shot, and the bore of the inner slides cleaned with a rod.

Water key corks are a constant source of trouble and should be removed as soon as any suspicion of leakage occurs. Coiled water-key springs should not be oiled, but the flat type of spring on Cornets, should be oiled occasionally. When mouthpieces, shanks and slides become stuck, the ferrule should be *lightly* tapped with a small *wooden* mallet, a little patience will often work where force is of no avail. Slides when stuck can often be released by a little judicious twisting and rocking.

Heavier instruments should not be laid on gravel or other rough surfaces, a scratch is more difficult to remove than a dent. Basses and Euphoniums should not be stood on the Bell unless supported by a rack of some kind.

DRUM KIT

Woodwork of Xylophones, etc., should be slightly oiled occasionally. Xylophone beaters, bell hammers, etc., should be soaked in water to keep heads firm.

All chromium should be frequently greased to prevent peeling, particularly round joins of stays or struts.

Skin of Tambourines should be damped and *dried slowly* to keep them taut.

Snare heads should be examined to see that wire bound snares are not cutting the vellum, a small piece of vellum should be inserted between snares and hoop on each side. Drums with screw bracing should be greased round each stay. Working parts of Vibraphones need oiling and the rubber bands on pulleys lightly dusted with resin to secure a grip. Tympani screws should be kept greased and heads well lapped. Tubaphones should be examined to see that felt supporting the tubes is soft and in place. Xylophones should be examined to see that the rubber-covered stops between notes are in place, a spare piece of rubber tubing should be kept to replace perished rubbers, but care should be taken not to overdo the oiling (linseed oil) of Xylophone notes as this tends to make the notes soft and spongy.

PART I

INSTRUMENTATION OF MILITARY BANDS

TABLE OF THE RELATIVE PITCH OF INSTRUMENTS

Before proceeding to deal with the individual technicalities of each instrument, it is considered advisable to tabulate all the instruments in order, so that the student will be able to ascertain the pitch of any instrument at a glance.

In the majority of cases the note "middle C" will be taken as the pivot for the instrumental transposition.



There are, however, cases where this note is not in the compass of an instrument (Piccolo and B \flat Bass, for example), in which case the octave above or below will be taken as an alternative.

The table will consist of :—

A—NON-TRANSPOSING INSTRUMENTS.

(i.e., Instruments of Concert Pitch.)

B—TRANSPOSING INSTRUMENTS.

(i.e., Instruments not of Concert Pitch.)

The given list includes instruments that are used only occasionally, and also instruments which are gradually being replaced.

A.	B.	
Flute (Concert).	4. {	B \flat Cornet.
*Piccolo (Concert).		9. B \flat Trumpet.
Oboe.		10. B \flat Baritone.
Bassoon.	5.	Cor Anglais.
1. Tenor Trombone.		B \flat Clarinet.
2. Bass Trombone.	6.	B \flat Soprano Saxophone.
1. Euphonium.		E \flat Alto Saxophone.
3. E \flat Bass.		B \flat Tenor Saxophone.
1. B \flat Bass.	7.	E \flat Baritone Saxophone.
*String Bass.	8.	Horns E \flat or F.



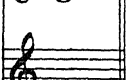
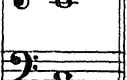

*The Piccolo and String Bass though they sound an octave above and below the written note respectively, have been classed as non-transposing instruments, because they play in the same key as an Instrument of Concert Pitch.

NOTE.—Students are earnestly advised to commit the following list of instruments to memory, as it is this particular aspect of the Military Band which causes the most confusion. Military Band instrumentation, scoring and general knowledge, depends upon the instant recognition of Transposing and Non-Transposing instruments.

1. The B \flat Tenor Trombone, the B \flat Bass and the B \flat Euphonium are termed B \flat instruments because their natural series of Harmonics is on B \flat , the generator. They are termed Concert pitch instruments because when the performer plays C the actual note C is produced.
2. This instrument is called G Trombone because its natural series of Harmonics is on G, the generator. It is called Concert pitch because the note C is produced when the performer plays C.
3. The E \flat Bass is so called because it is built in E \flat , the natural series of Harmonics being on E \flat , the generator. As in the case of the B \flat Bass, the instrumentalist produces C when the note C is played.
4. Nearly all Military Bands have adopted the Concert pitch Flute and Piccolo, but as the D \flat Flutes and Piccolos are still in use, they will be dealt with in their respective chapters.
5. The Cor Anglais is not a wholly recognised Military Band instrument, but it is sometimes used to produce the intended effect desired by any composer.
6. The Soprano Saxophone is occasionally used in the Military Band, but, as yet, it is not considered as essential. When used, it generally plays from the Oboe part.
7. The Baritone Saxophone, like the Soprano Saxophone, is also seldom used, not yet being considered essential to the absolute requirements of the Military Band. When used, it reads from the Bassoon or Bass parts.
8. Though Horns are sometimes written for in both E \flat and F in Military Band music, the F crook is invariably used, the instrumentalist making the necessary transposition.
9. Some Military Bands, especially Cavalry Bands, use the B \flat Trumpet, the instrumentalist reading from the Cornet parts.
10. The Baritone is gradually being replaced by the Tenor Saxophone, as it is not now considered essential to the Military Band.

TABLE A
NON-TRANSPOSING INSTRUMENTS

Piano Sounds.

	To be in tune the Concert Flute will play	
	To be in tune the Concert Piccolo ⁽¹⁾ will play	
	To be in tune the Oboe will play	
	To be in tune the Bassoon will play	
	To be in tune the Tenor Trombone will play	
	To be in tune the Bass (G) Trombone will play	
	To be in tune the Euphonium will play	
	To be in tune the E \flat Bass will play	
	To be in tune the B \flat Bass will ⁽²⁾ play	
	To be in tune the String Bass ⁽³⁾ will play	

Note.

⁽¹⁾ The Piccolo sounds an octave higher than written. Middle C is out of the compass.

⁽²⁾ The middle C is not in the compass of the B \flat Bass.

⁽³⁾ The String Bass sounds an octave lower than written.

TABLE B
TRANSPOSING INSTRUMENTS

Piano Sounds.



To be in tune the D \flat Piccolo will play

To be in tune the D \flat Flute will play

To be in tune the Cor Anglais will play

To be in tune the E \flat Clarinet will play

To be in tune the B \flat Clarinet will play

To be in tune the B \flat Soprano Saxophone
will play

To be in tune the E \flat Alto Saxophone will
play

To be in tune the B \flat Tenor Saxophone
will play

To be in tune the E \flat Baritone Saxophone
will play

To be in tune the F Horn will play

To be in tune the E \flat Horn will play

To be in tune the B \flat Cornet will play

To be in tune the B \flat Trumpet will play

To be in tune the B \flat Baritone will play



COMPASS AND TUNING NOTES OF INSTRUMENTS

As in the case of the pitch of instruments, it is considered advisable that the student should see as a whole a Tabulated Diagram, which will show at a glance the compass and tuning notes of all the instruments which are being studied. As a tuning note, B \flat has been taken, but it must be borne in mind that this does not give a good note for every instrument to tune on.

This Tabulated Diagram appears on the following page.

It is impressed upon the student that the notes seen in the diagram are those which are played (or fingered) *and not* the actual notes produced.

Note.—Where two compasses are given, the one in brackets will be the practical ; the other the théoretical.

THE GROUPING OF INSTRUMENTS

The instrumentation of the Military Band is divided into three groups :—

I.—WOOD WIND.

Flutes.

Piccolos.

Oboes.

⁽¹⁾ Cor Anglais.

Clarinets.

⁽²⁾ Saxophones.

Bassoons.

II.—BRASS.

Horns.

Cornets.

Trumpets.

⁽¹⁾ Baritone.

Trombones.

Euphonium.

Basses.

III.—PERCUSSION.

Bass Drum.

Timpani.

Side Drum.

Tubular Bells.

Glockenspiel.

Tubophone.

Xylophone.

Triangle.

Castanets.

Cymbals.

⁽³⁾ Celesta.

Tambourine.

Vibraphone.

Chinese Drum.

Anvil.

⁽¹⁾ Not regularly employed.

⁽²⁾ Though the Saxophone is made of metal it is classed as a wood wind instrument because the sound is produced by a single reed.

⁽³⁾ Rarely used.

TABULATED DIAGRAM OF COMPASS AND TUNING NOTES

WOOD WIND		BRASS		Tuning Note	
	Tuning Note		Tuning Note		Tuning Note
Concert Piccolo		F Horns		..	
Concert Flute..		B \flat Cornet ..		..
Oboe ..		B \flat Trumpet		..	
Cor Anglais ..		B \flat Baritone		..	
E \flat Clarinet ..		B \flat Tenor Trombone		..	
B \flat Clarinet ..		G Bass Trombone		..	
B \flat Soprano Saxophone		Euphonium (4th Valve)		..	
E \flat Alto Saxophone ..		E \flat Bass (4th Valve).		..	
B \flat Tenor Saxophone		B \flat Bass ..		..
E \flat Baritone Saxophone		String Bass (4 Strings).		..	
Bassoon ..					

Highest
Harmonic.

The complete Set generally consists of :

1 Conductor	1 Solo and 1st B \flat Cornet
1 Concert Flute and Piccolo	1 2nd B \flat Cornet
1 D \flat Flute and Piccolo	1 B \flat Trumpet
1 E \flat Clarinet	1 1st and 2nd Horns in F
2 Solo B \flat Clarinets	1 3rd and 4th Horns in F
1 1st B \flat Clarinet	1 1st Trombone
1 2nd B \flat Clarinet	1 2nd Trombone
1 3rd B \flat Clarinet	1 Bass Trombone
1 1st Bassoon	1 Euphonium, Treble Clef
1 2nd Bassoon	1 Euphonium, Bass Clef
1 Oboe	2 Basses
1 E \flat Alto Saxophone	1 Drums
1 B \flat Tenor Saxophone	1 Timpani
1 E \flat Baritone Saxophone	

AMERICAN BAND AND SYMPHONIC INSTRUMENTATIONS

American Band Instrumentation (40 to 50 players)

1 Conductor	3 Solo and 1st B \flat Cornets
1 Concert Flute and Piccolo	2 2nd B \flat Cornets
1 D \flat Flute and Piccolo	1 3rd B \flat Cornet
1 E \flat Clarinet	2 B \flat Trumpets
1 E \flat Alto Clarinet	2 1st and 2nd Horns in E \flat
2 Solo B \flat Clarinets	2 3rd and 4th Horns in E \flat
2 1st B \flat Clarinets	1 1st and 2nd Horns in F
2 2nd B \flat Clarinets	1 3rd and 4th Horns in F
2 3rd B \flat Clarinets	1 1st Trombone
1 B \flat Bass Clarinet	1 2nd Trombone
1 1st Bassoon	1 Bass Trombone
1 2nd Bassoon	1 Euphonium (Baritone) Treble Clef
1 Oboe	1 Euphonium (Baritone) Bass Clef
1 E \flat Alto Saxophone	3 Basses
1 B \flat Tenor Saxophone	2 Drums
1 E \flat Baritone Saxophone	1 Timpani
1 B \flat Bass Saxophone	

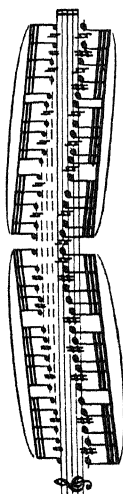
Symphonic (Contest) Instrumentation (60 to 80 players) :

It contains in addition to the parts of the American Band Instrumentation :

1 Concert Flute and Piccolo	1 1st Flugelhorn
1 3rd Concert Flute	1 2nd Flugelhorn
1 Solo B \flat Clarinet	1 1st and 2nd Horns in F
1 1st B \flat Clarinet	1 3rd and 4th Horns in F
1 2nd B \flat Clarinet	3 Basses
1 3rd B \flat Clarinet	1 Drum
1 Oboe	1 String Bass
1 E \flat Alto Saxophone	

CONTINENTAL INSTRUMENTATION

These parts are in addition to the British Standard Instrumentation.



HARMONICS

POSITION

*Bottom notes C and C₂ not obtainable on Piccolo.

Harmonic fingering frequently used to simplify rapid passages top register

SCALE OF FINGERING FOR 8 KEYED FLUTE AND 6 KEYED PICCOLO

LEFT
HAND

RIGHT
HAND

‡ Signifies start and finish of Piccolo fingering.

+ Signifies start and finish of Piccolo fingering.

GROUP I—WOODWIND

THE FLUTE

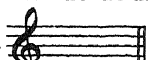
Fr. Flûte. It. Flauto. Ger. Flöte.


The Flute is a wind instrument, approximately 2 feet in length, and is generally made of wood, ebonite or white metal, or for presentation purposes, silver and even gold.

Technically the Flute is a stopped pipe, and consists of three joints, which are :—

(a) *The Head*.—About $8\frac{1}{2}$ inches in length and plugged at one end. This part contains the hole which is blown into, thus forming the “embouchure” which produces the sound.

(b) *The Body*.—The long centre joint which is bored with six holes, which produce the hexachord, and carries the necessary keys for trills, and the intervening semitones (see Plate I).

(c) *The Foot Joint*.—A comparatively modern addition to the Flute. It adds two more semitones to the compass, and on some models has additional keys which produce low B \flat and B \natural .
viz. :— 

The old type, which had no foot joint, had as its lowest note D \sharp :— 

The Flute is a reedless instrument. In those of the reed class, such as the Clarinet, Oboe and Bassoon, the air stream is sent into the instrument through the medium of the reed. In the case of the Flute, however, the air stream from the player's lips enters directly into the aperture.

The *Bore* of the modern Flute is cylindrical, with a parabolic head. The tube is perforated with holes, which are closed by means of keys or by the fingers direct. On the modern instrument, all the holes are covered by keys.

HISTORY OF THE FLUTE

The name “flute” is derived from the word “flauta,” which is the Latin for “lamprey,” a small fish which had seven holes in its body, corresponding with the holes on the front of the Flute.

We first see it mentioned in the Old Testament—I Samuel x, 5, and in Daniel iii, 5, 10, 15, where later it is definitely mentioned as a Flute. It is said to have been made from reed, bone, wood or horns of animals. This dates us back to the days of the Babylonians, but it is an undoubted fact that the Flute was used by the ancient Egyptians in the time of the Pharaohs many centuries before. Illustrations of Flutes,

both a-Bec and Traverso, are to be seen on the pyramids of Gizeh and Memphis, and also on other tombs.

"Pan's Pipes" were also derived from the original flute pipe, which consisted of several reeds strung together, and were extensively used by the Hebrews, Greeks and Romans.

Later we hear of pieces of wood of definite length with holes pierced in them. This was followed by the really useful invention of adding keys to the instrument, thus facilitating the production of semitones.

The next class consists of the varieties of the "Flûtes-Traversières," or German Flutes, now simply termed Flutes.

Their tone is produced by the lips blowing directly across a lateral mouth-hole.

The most ancient variety is a short fife called "Schweizer-pfeiff," or "Zwerg-pfeiff" (Swiss-fife or Dwarf-pipe) (No. 11 on the accompanying illustrations, Plate II) which, with very slight improvements on the old pattern, is still used in the Drum and Fife band of the Army. In fact, our modern Piccolo (No. 1) is an improved form of the "Schweizer-pfeiff."

The old Flutes were simple instruments, with no keys (Nos. 6-10). But gradual improvements, the complete record of which would be rather tedious, have rendered it one of the best of modern instruments, alike of service to wind-bands and orchestras.

In the accompanying illustrations (Nos. 2, 3 and 4) can be traced the gradual addition of new keys, as added from time to time.

The Traverse Flute, or "Flauto Traverso" (*It.*), was made in various sizes, forming a sort of choir, consisting of Bass Flute (Nos. 5 and 6) in "D," an octave lower than the Concert Flute, and of about 50 inches in length; Tenor Flute (No. 8), a fourth higher in "G"; alto, in "D" (No. 9), our present Flute; Descant, in "G" (No. 10), a fourth above the preceding one; and sometimes, but not too often, the "Zwerg-pfeiff" was added (No. 11).

The Flute Traverso, or Crossways Flute, was the name by which our modern Flute was known in the fifteenth century. Following the invention of the foot-joint, more keys were added, with the result that the compass and possibilities of the Flute were more apparent.

At this stage the instrument seemed to come to a complete standstill, nothing of importance having been added to it until a Captain Gordon, who was an officer in the Swiss Army and of English descent, began making improvements in the construction of the Flute in the year 1826. Boehm commenced his improvements in 1832, following the general principles of Captain Gordon.

It is a point of interest that the aforementioned were not professional musicians, but were merely interested in the Flute from an amateur standpoint.

Boehm's improvements were as follows :—

All holes in the instrument were covered by keys.

Modified bore, *i.e.*, the boring of the Flute at the exact points of the tube indicated by the Scientific principles of resonance, and not in regard to the facility of finger stretching. This matter was not previously considered.

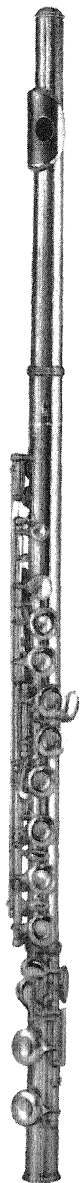
The adoption of the Boehm system caused much acrimonious discussion regarding the respective merits of the old and new systems. The new system was, however, quickly taken into use by flautists all over the world, and eventually established itself. In consequence, the old eight-keyed Flute became more or less obsolete.

There can be no argument as to the gain in accuracy of intonation, volume of tone, and facility of execution that the new system offered.

PLATE I.



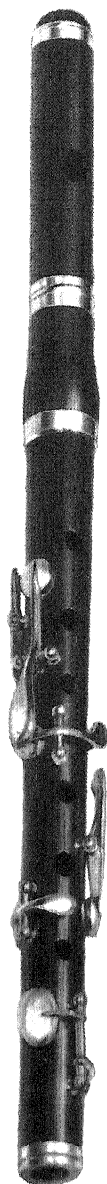
Concert Flute
(8 keys)



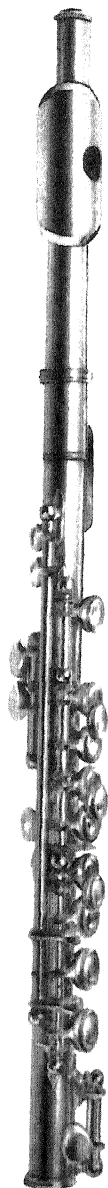
Concert Flute
(Boehm System)
with closed
G# Key



Concert Flute
(Pratten System)

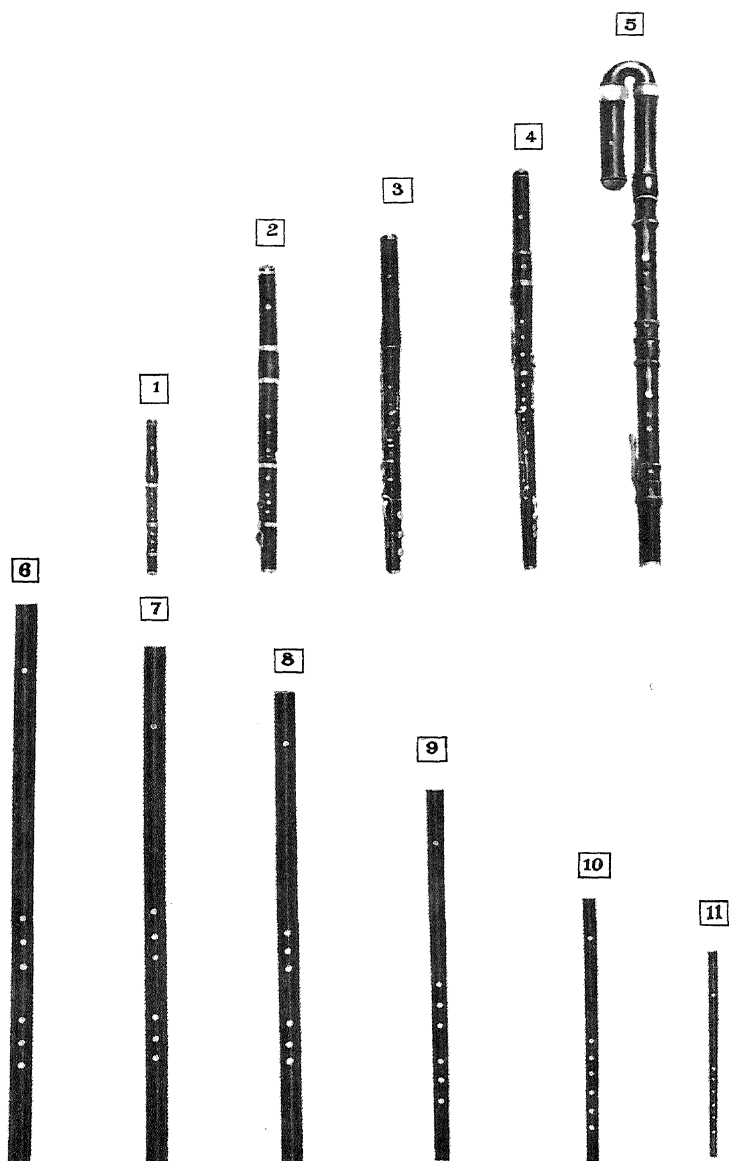


Piccolo
(Symple System)



Piccolo
(Boehm System)
with closed
G# Key

PLATE II.

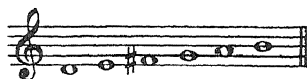


EVOLUTION OF THE FLUTE
For description see page 23.

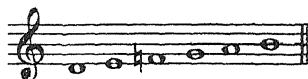
FINGERING AND GENERAL TECHNICAL KNOWLEDGE OF THE FLUTE



Hexachord.—The natural scale of six notes, *i.e.* the six holes on the eight-keyed Flute, viz. :—



The Hexachord on the Boehm system Flute is :—



The first three fingers of each hand, when pressed down (closed) upon the six holes or keys produces the note D, and by lifting each of the fingers in turn the hexachord is produced.

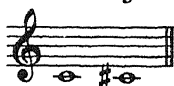


Overblowing.—The Flute being a “stopped” pipe, overblows in the octave. The term “overblow” means a little alteration in lip control and angle, and a keener pressure on the air column by the tongue.

The performer fingers the note D, and by overblowing produces the same note an octave above.

The second octave scale is generally fingered the same as its lower octave.

Foot Joint.—The two notes on this portion of the instrument C# and C₁, being outside the natural hexachord, are produced by the action of the little finger of the right hand.




Harmonics.—The harmonics of the Flute are similar to those of all string instruments, as well as wind instruments, being constructed on the open pipe principle. This aspect of Flute playing is overlooked by some performers, yet it is one worthy of attention.


The same fingering employed for any one of its lower notes will be found to give a rising series of overtones: the octave, fifth, flattened seventh and double octave.

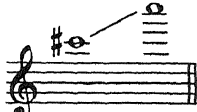
There are several key systems in general use, the most familiar being the “Boehm.”

TONAL REGISTERS

The complete compass of the Flute may be divided into three registers or tonal qualities, and are as follows :—

(a)  This, the lowest register, is the most difficult from the point of view of tone production, being rather heavy and muddy in quality, but in the hands of a first-class performer it is capable of great expression and beauty of tone. When music is written for this, the most emotional part of the instrument, it should be used with design for a special effect or for a solo. It must not be overburdened with accompaniment, and must on no account be used in a *ff* passage in the full band. See Part II on "Arranging for Military Band."

(b)  In this, the middle register, we have a silky and delightfully satisfying tone. It is a beautiful and flexible register, and the part of the instrument in which to write solos and prominent passages. There are numerous orchestral and military band solos, etc., which will illustrate the use of this particular quality of tone in the best manner.

(c)  This is the third and top register, and is most effective in *ff* passages. It is the most brilliant part of the Flute. The extreme notes are shrill, ineffective and difficult to produce; they are much more effective on the Piccolo. (See Part II.)

USES IN THE MILITARY BAND

It should be remembered that the average Military Band has only one Flute, the performer doubling with the Piccolo. Inconvenience is caused by arrangers writing for two Flutes. The normal Military Band, either service or civilian, consists of from 25 to 30 performers and at times a lesser number; consequently, there is little opportunity for the luxury of two Flutes.

The Concert Flute has replaced the D \flat Flute. The Table of Tuning at the commencement of this book (page 19) deals with Concert Flutes and Piccolos. The actual subject of arranging for a Military Band will be dealt with in Part II.

In the Orchestra, it is an invaluable "solo" and "colour" instrument, and all manner of florid passages may be written for it. Single, double,

triple and flutter tonguing is quite simple, and when double tonguing is desired on one note, quite a presentable imitation is obtained of the reiterated movement which a Violin produces by spring bowing.

In a full band passage it is useless to write for the Flute in its lowest register, as the volume of tone in comparison to other instruments is weak, and is entirely lost in the ensemble.

All manner of embellishments may be written, as they can be performed easily, and scalar passages are its special "forte."

The Flute blends well with the following instruments :—

Oboe in octaves.

Bassoon, in single or double octaves.

E \flat Clarinet in unison.

B \flat Clarinet is beautiful in all combinations with the Flute.

Horn.

Cornet.

Trombone.


MISNAMING OF FLUTES

Owing to the great inconvenience caused to the majority of students and arrangers by the number of misnamed Flutes used in the Service and Civilian Drum and Fife Bands, the author has decided to devote a few remarks to this perplexing question.

The following combination is used in Service Drum and Fife Bands, and in most Civilian Flute Bands.

D \flat Piccolo, B \flat Flutes, F Flutes, E \flat Flutes, and B \flat Bass Flutes.

The misnaming of these Flutes was brought about by the old-fashioned idea of naming them by the note *produced* by the closed pipe, that is, when all the holes are covered.

This note is D on all Flutes. 

The closed pipe on the B \flat Flute produces B \flat .

„ „ „ „ „ F „ „ F.

„ „ „ „ „ E \flat „ „ E \flat .

„ „ „ „ „ B \flat Bass Flute produces B \flat .

The correct procedure in all cases would have been to sound C natural, when the resultant Concert-pitch note would give the true name of the instrument.

From this the student will easily recognise the true name of each instrument, viz. :—

The B \flat Flute is really in A \flat .

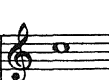
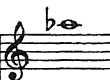
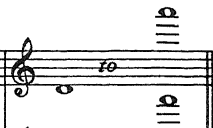

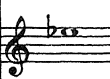


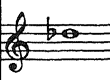
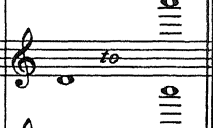


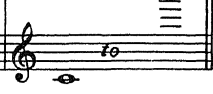
„ F „ „ „ „ E \flat .

„ E \flat „ „ „ „ D \flat .

„ B \flat Bass Flute is really in A \flat .

Similarly, in old Military Band scores the D \flat Flute and D \flat Piccolo have been misnamed, being invariably called E \flat Flute and E \flat Piccolo.

A Tabulated Diagram follows :—

Named.	True Name.	Plays.	Sounds.	Compass.
B \flat Flute	A \flat Flute			
F Flute	E \flat Flute			
E \flat Flute	D \flat Flute			
B \flat Bass Flute	A \flat Bass Flute			

Flute-a-bec .. The direct Flute, played by means of a mouth-piece, really a Flageolet.

Fipple Flute .. Alternative name to Flute-a-bec.

B \flat Flute .. Specially used in Drum and Fife Bands. Gives facility for playing in flat keys.

Alto Flute .. Wrongly named, really a Bass Flute.

Tenor Flute .. Obsolete, used in the 16th century.

Bass Flute .. Bears a similar relationship to the Concert Flute, as the Viola does to the Violin.

The following extracts are examples of typical flute writing, taken from well-known works :—

Examples A and B are from the Scherzo of “The Midsummer Night’s Dream,” by Mendelssohn, arranged for Military Band by the author.

EXAMPLE A

Allegro vivace

pp *pp* *ppp*

EXAMPLE B

Allegro vivace *sempre stacc.*

ppp *ppp*

Extract from "Giovanna D'Arco"

Verdi

Andante pastorale *semplice*

pp *pp*

Three extracts from the Overture "Egmont"

Beethoven

Allegro No. 1.

pp *f*

Allegro con brio No. 2.

p *cres - - - cen - -*

Allegro vivace No. 3

pp *pp*

TABLE OF SHAKES
For Flute with closed G#

LEFT HAND.

RIGHT HAND.

LEFT HAND.

RIGHT HAND.

The first system of musical notation consists of two staves. The top staff is labeled 'LEFT HAND.' and the bottom staff is labeled 'RIGHT HAND.' Above the left staff, there are 15 trill/ornament symbols: $tr\flat$, $tr\sharp$, tr , $tr\sharp$, $tr\flat$, $tr\sharp$, tr , $tr\flat$, $tr\sharp$, $tr\flat$, $tr\sharp$, tr , tr , $tr\sharp$, $tr\flat$, and $tr\sharp$. The left staff contains various trill and ornament symbols (diamonds, crosses, and dots) and fingerings (7, 7tr, 7). The right staff contains various trill and ornament symbols (circles, crosses, and dots) and fingerings (3, 5tr).

LEFT HAND.

RIGHT HAND.

The second system of musical notation consists of two staves. The top staff is labeled 'LEFT HAND.' and the bottom staff is labeled 'RIGHT HAND.' Above the left staff, there are 15 trill/ornament symbols: tr , $tr\flat$, $tr\sharp$, $tr\sharp$, tr , tr , tr , $tr\sharp$, $tr\flat$, $tr\sharp$, tr , $tr\sharp$, $tr\flat$, $tr\sharp$, tr , and $tr\flat$. The left staff contains various trill and ornament symbols (diamonds, crosses, and dots) and fingerings (7, 7tr, 7). The right staff contains various trill and ornament symbols (circles, crosses, and dots) and fingerings (3, 5tr, 4tr, 4tr, 7).

USES IN THE MILITARY BAND

The Piccolo is always played by the Flautist, so when writing for either of these instruments care should be taken to ensure that the performer has sufficient time to change from one instrument to the other.

As the Piccolo is the highest-pitched instrument in the Military Band, it is useful for :—

- (a) Continuing passages which are too high for the Flute.
- (b) “ Doubling ” the melody in the extreme octave.
- (c) Giving a point or edge to wood wind passages.
- (d) Reproducing extreme violin harmonics.

Scalic passages, *arpeggi* and rapid flourishes are its special forte. Trills can be brilliantly executed ; consequently, it is greatly used for solos resembling the notes of birds.

Examples of how the Piccolo is employed in the Military Band are now given :—

This is the first subject of Rossini's Overture to the “ Barber of Seville,” and is an example of “ Doubling ” the melody in the extreme octave (*see* (b) above).



In this extract, taken from a Military Band arrangement of another of Rossini's works, the Overture “ Semiramide,” the Piccolo is used as a solo instrument.



In the following extract from Rimsky Korsakov's “ Scheherazade ” the Piccolo is used to reproduce extreme violin harmonics, and also to continue a passage which is in turn too high for the Flute and Clarinet.

ORCHESTRA

Solo Violin

p Cadenza

Arpa *rit.*

pp Vlns

Viola

Cello & Basso

MILITARY BAND

Flute

Solo Clt.

p Cadenza

p rit.

Piccolo sounding 8ve higher.....

pp Clts.

Euph & Bass

etc.

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This extract from Ballet "Coppelia" by Delibes illustrates the use of the Piccolo to give point to a wood wind passage.

8ves

Piccolo

1st Clt. 8ves

2nd & 3rd Clts.

etc.

Here again the Piccolo is called upon to continue a passage which goes too high for the Clarinets. The extract is taken from Mendelssohn's Overture "Ruy Blas."

Piccolo 8ve lower but sounding as written here

Clts.

Lento

ff

Basses & Euph.

Piccolo solos are very popular items with Military Bands. Florid passages that call for double and triple tonguing, and lengthy *cadenzas* which are written to show the skill of the performer, are the characteristics of these solos. This extract is taken from the Piccolo solo "Cassiopeia" by R. Barsotti. The composer intends this to be played on the D \flat Piccolo whose part would be transposed down a semitone into C Major.

Tempo di Polka

Cadenza

The following is a typical Piccolo Duet. Note that the parts are written mostly in 3rds and 6ths.

The composer has intended this to be played by Concert Piccolos.

Duet "The Joy of Living"

Cole

1st Concert Piccolo

2nd Concert Piccolo

Band

By permission of J. W. Cole, Esq., Duke of York's School. Dover.

THE OBOE

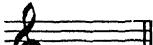
The Oboe is a wind instrument of the double reed family. It is of considerable age, and probably it is second in order of antiquity to the Flute.

It is a direct descendant of the Schalmey, other members being the Pommers and Bombards. It is made of rosewood, cocuswood, ebonite or metal. Cocuswood is generally preferred. It is about 2 feet in length, and is made up of the following sections :—

The Reed.—This consists of two delicately made pieces of cane, the ends of which are bound round a small metal staple. This is fixed into a small cylindrical cork band. The length of the reed and staple is about $2\frac{1}{2}$ inches. The cane of the reed, which is roughly $\frac{1}{4}$ -inch broad, is placed between the performer's lips. The corked end of the reed is fitted into—

The Top Joint.—This section fits into—

The Bottom Joint.—These two joints between them form the main construction of the instrument. They contain the Hexachord and all the key-work and mechanism. To the bottom joint is added—

The Bell.—A cone-shaped fixture. This section usually possesses a B \flat key  which is controlled from the bottom joint.

Sound Production.—The reed being in the performer's mouth is the actual producer of the sound. The air, after passing through the reed, forms the air column inside the pipe, which takes the form of a resonating medium. The air column actually assists the vibrations of the reed by its own synchronized vibrations.

The Bore is conical. Commencing with a width of about $\frac{1}{4}$ -inch at the reed entrance, it ends with a diameter of about 2 inches at the end of the bell. As in the case of the Flute, the tube is pierced with holes which are controlled by means of keys or by the fingers direct.

HISTORY

The word *Oboe* is derived from the French word *Hautbois*. It has been in use since very early times in various forms and styles throughout the world. Examples of its origin can be seen at the British Museum to this day. Old pictures and prints prove that a crude form of Oboe was even employed by the Romans. It has also been traced in the paintings and sculptures of the Ancient Greeks and Egyptians. It is recorded as having been used in the following countries before its use in Europe—Hindustan, China, Arabia, parts of Africa and ancient America. This family of instruments has been classed under such names as Brummer, Schalmey, Fagott, Shawm, Courtant, Chalmeau, Bombard and Cervelt. Ancient history tells us of its use in lamentations for the dead.

CHART OF FINGERING FOR SIMPLE SYSTEM OBOE.

	RIGHT HAND	LEFT HAND
1	●	●
2	●	●
3	●	●
4	●	●
5	●	●
6	●	●
7	●	●
8	●	●
9	●	●
10	●	●
11	●	●
12	●	●
13	●	●
14	●	●
15	●	●
16	●	●
17	●	●
18	●	●
19	●	●
20	●	●
21	●	●
22	●	●
23	●	●
24	●	●
25	●	●
26	●	●
27	●	●
28	●	●
29	●	●
30	●	●
31	●	●
32	●	●
33	●	●
34	●	●
35	●	●
36	●	●
37	●	●
38	●	●
39	●	●
40	●	●
41	●	●
42	●	●
43	●	●
44	●	●
45	●	●
46	●	●
47	●	●
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84	●	●
85	●	●
86	●	●
87	●	●
88	●	●
89	●	●
90	●	●
91	●	●
92	●	●
93	●	●
94	●	●
95	●	●
96	●	●
97	●	●
98	●	●
99	●	●
100	●	●

EXPLANATION OF CHART: \diamond Thumb plate released.

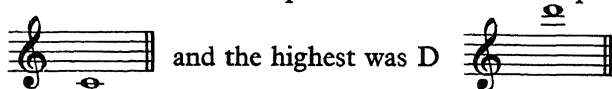
- ◇ Thumb plate released.
- Hole closed.
- ◐ Hole half closed.
- Hole open.

When a figure is given, it indicates that the key so numbered is depressed.

The Hautbois was undoubtedly in use in England during the reign of Edward III (1312-77). It was then known by the name of *Weaght*, the King having three *Weaghts* in his private band. The origin of the name *Weaght* lies in the fact that the night watchman or castle *weaght* had to carry a very crude form of Hautbois on his rounds, and play it at regular intervals. From the name "*Weaghts*" gradually evolved the word "*Waits*." In the fifteenth century the Oboe or Hautbois formed the nucleus of the Military Band, probably owing to its intensity of tone and carrying power. Even to this day, in some parts of Germany, the word Oboist means a military bandsman, and Oboe-meister a military bandmaster.

There is in existence an engraving showing the Band of the Guards (18th century) on duty outside St. James's Palace, London. The instruments of this old band consisted of crude Oboes and Bassoons of various shapes and sizes, the only addition being a few Fifes, Drums and Cymbals.

From the 17th century all the composers have written for the Oboe, music of great emotion, feeling and beauty. Rossini, when he visited England in 1823, brought his own Oboist to ensure a decent rendering of his works. At this period the lowest note procurable was C natural,



A semi-Barret-Boehm system was applied later. The modern Oboe, with its perfected key mechanism, has become probably the most elaborate and complicated of all wind instruments.

M. Barret and M. Thiebert (both of Paris) were two of the pioneers of the beautiful instrument in use to-day. Barret was both a supreme artist and an ingenious mechanic, while Thiebert was a great writer for the Oboe, and an eminent maker of Oboes. Barret was Professor of the Oboe at the Royal Military School of Music, Kneller Hall, for some years.

The present day Oboe is a beautifully equipped instrument, with sixteen or seventeen keys and two rings.

VARIOUS MEMBERS OF THE OBOE FAMILY

Oboe d' Amore.⁽¹⁾ Pitched in A.

Cor Anglais.⁽¹⁾ Pitched in F.

Oboe Da Caccia.⁽¹⁾ Pitched in F.

Heckelphone
(Baritone Oboe).⁽¹⁾ Pitched in C.
(Sounds 8ve lower.)

Compass.

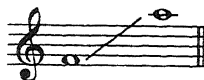
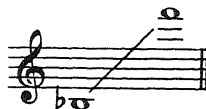


(1) Still used in the Orchestra

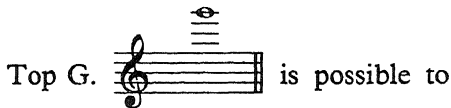
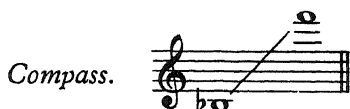
Compass.

Musette.

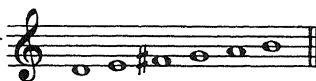
Pitched in C.

*Piccolo Oboe*
(Soprano Oboe).Pitched in E \flat .

FINGERING AND GENERAL TECHNICALITIES, ETC.



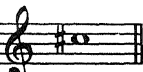
performers of exceptional skill.

Hexachord, i.e., the six holes—the natural scale of the instrument.

The first three fingers of each hand, when pressed down (closed) upon the six holes, produce the note D.

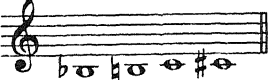


By lifting each up in turn, the hexachord is produced, no keys whatsoever being used.

The open note  can be used with great advantage by the experienced player. The beginner should be careful of using it as the intonation on this note is difficult to control.*Overblowing.*—The Oboe overblows in the octave (*see* the chapter on the Flute—page 28—for the definition of overblowing). The second octave of the instrument can be fingered exactly the same as the lower, or first octave. (*See* fingering chart.)

The following illustration may convey a somewhat clearer explanation of the system of fingering. The top notes in each may be fingered exactly the same as the lower notes :—



The lowest natural note of the Oboe is D, *i.e.*, the lowest note of the hexachord. All notes lower than this D,  are operated by means of the little fingers of each hand.



The harmonic fingering of the Oboe, however, is seldom used ; the notes are inclined to be weak.

For all trills, tremolos, special keys, etc., see charts on pages 41 and 49

TONAL REGISTERS

Throughout the whole compass of the Oboe the timbre changes. It is divided into four distinct tonal registers.

The Low Register.—The tone is rather thick and vibrant. In the hands of a good performer it is thick and rich. The lower notes being rather difficult to produce, it would be inadvisable to commence a solo on the low B \flat . The following solo is an extract from the Military Band arrangement of "Peer Gynt" Suite by Grieg :



The Middle Register is the real oboe tone of a beautiful and delightful quality. The Oboe is essentially a "middle register" instrument. No instrument is so plaintive, pleading and beseeching in character. In this register the Oboe is superior in intensity and timbre to all other wind instruments. It is absolutely unrivalled in the manner in which it can swell and decrease < > the volume of tone. No instrument can compare with it for sustaining power ; as instanced by the curious fact that the Oboe requires less wind than any other wind instrument.

The following is an extract from a typical solo in this register from the Overture "In Memoriam" by Sullivan :—

Andante religioso



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The High Register.—Obviously there cannot be an instant change in the quality of tone in this register. In this part of the instrument the notes become weaker, the tone is not so powerful, and it cannot swell and decrease < > like the middle register.



Two examples of Oboe writing in this register are given. The first is an orchestral extract, and the second a Military Band.

"Pastoral Symphony"

Beethoven

Allegro



"Ballet de Prométhée"

Beethoven

Arranged for Military Band by the author.

Andante



The Extreme Register.—The notes are really weak and of very poor tonal quality. Unless they should be specially required for some particular effect, they are practically useless, besides being difficult to produce. Some performers can produce the two extreme notes F# and G, but they are better avoided. If these notes are used it is advisable to prepare them.



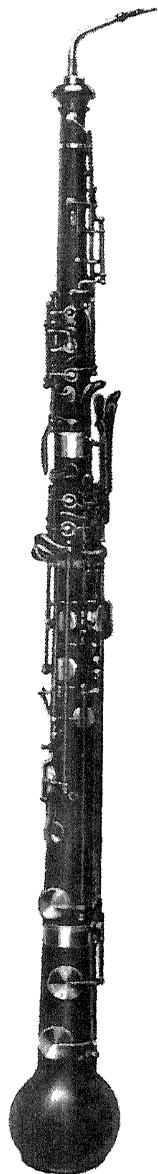
PLATE III.



OBOE DA CACCIA
From GROVE'S DICTIONARY OF MUSIC
(by permission of Messrs. Macmillan & Co. Ltd.)

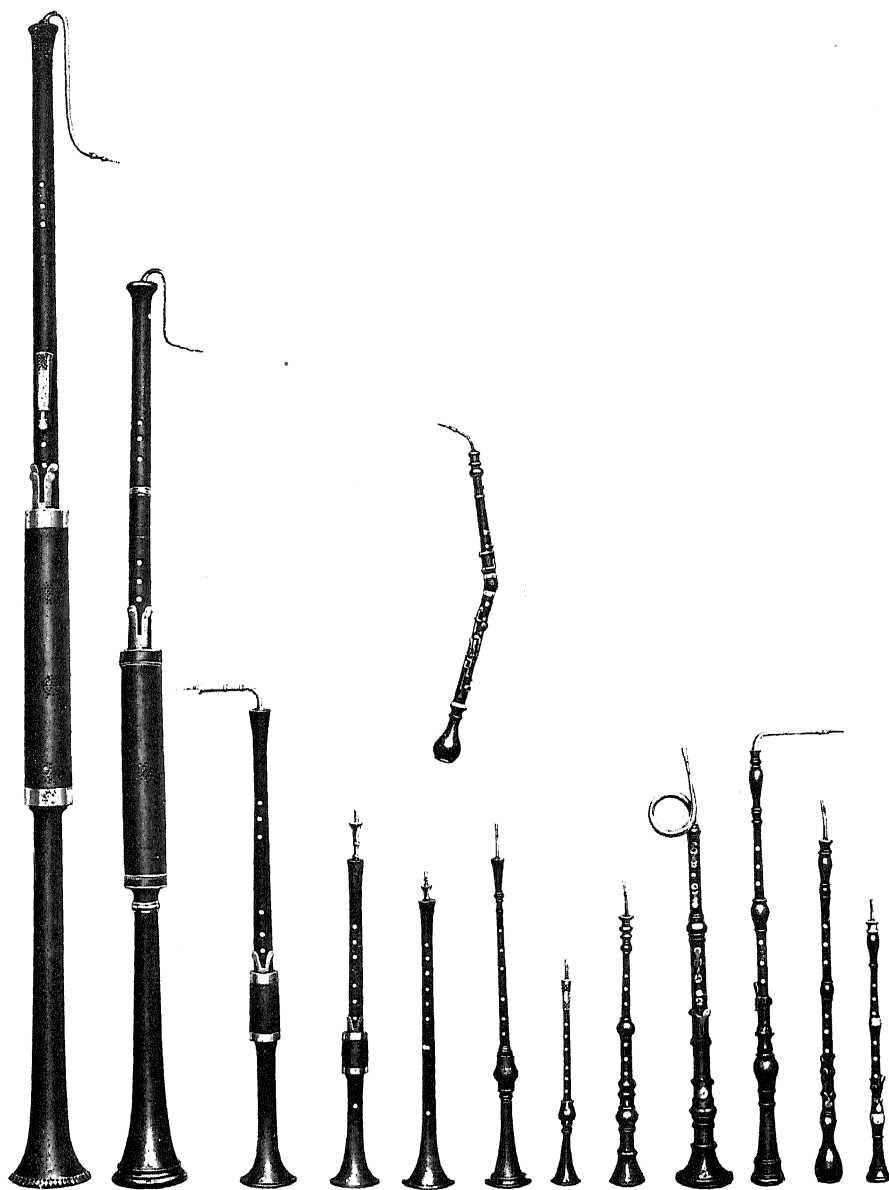


MUSETTE IN G.
With 7 keys



HECKELPHONE

PLATE IV.



EVOLUTION OF THE OBOE FAMILY
FROM ITS EARLIEST TYPES

TECHNICALITIES

The following intervals should be avoided in quick passages for the Oboe :—



The downward slurring of major and minor sixths is invariably difficult.

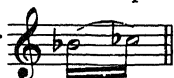
The auxiliary or long E \flat key manipulated by the little finger of the left hand simplifies such passages as the following by obviating the movement of the little finger of the right hand from the E \flat key to the D \flat key.



Both F naturals in the staff can be forked with advantage in nearly all passages in flat keys. A passage follows showing where and where not the forked F would be used. Forked notes are marked X.



The Spatule Key, which is situated very close to the index finger of the left hand (and is manipulated by that finger), simplifies the otherwise impossible trill.



The side key for B \flat and C is seldom used for anything but trills and sustained notes.

The following passage becomes quite easy when the B \flat in both octaves is fingered with the thumb plate instead of the side key :—



This passage is also simplified if the thumb plate is used instead of the side key for C in both octaves.



Whilst studying these examples the chart of fingering should be referred to and the keys mentioned recognised on the instrument if these technicalities are to be really understood.

Chart of Trills on the Simple System Oboe

A musical chart showing 24 trills on a six-staff system. The trills are arranged in six groups of four, each group corresponding to a specific key signature (C major, G major, D major, A major, E major, and B major). Each trill is labeled with a letter: 'I' for Impossible, 'D' for Difficult, and 'E' for Easy. The trills are written in treble clef with a key signature of one flat (Bb) and a common time signature (C). The trills are: 1. I (C4), 2. D (D4), 3. D (E4), 4. I (F4), 5. I (G4), 6. E (A4), 7. E (B4), 8. D (C5), 9. E (D5), 10. E (E5), 11. D (F5), 12. E (G5), 13. E (A5), 14. D (B5), 15. E (C6), 16. E (D6), 17. D (E6), 18. E (F6), 19. E (G6), 20. D (A6), 21. E (B6), 22. D (C7), 23. E (D7), 24. E (E7).

Chart of Tremolos on the Simple System Oboe

A musical chart showing 24 tremolos on a six-staff system. The tremolos are arranged in six groups of four, each group corresponding to a specific key signature (C major, G major, D major, A major, E major, and B major). Each tremolo is labeled with a letter: 'I' for Impossible, 'D' for Difficult, and 'E' for Easy. The tremolos are written in treble clef with a key signature of one flat (Bb) and a common time signature (C). The tremolos are: 1. I (C4), 2. D (D4), 3. D (E4), 4. I (F4), 5. I (G4), 6. E (A4), 7. E (B4), 8. D (C5), 9. E (D5), 10. E (E5), 11. D (F5), 12. E (G5), 13. E (A5), 14. D (B5), 15. E (C6), 16. E (D6), 17. D (E6), 18. E (F6), 19. E (G6), 20. D (A6), 21. E (B6), 22. D (C7), 23. E (D7), 24. E (E7). Below the chart, the text reads: ".....these tremolos are extremely difficult"

Explanation—E=Easy

D=Difficult

I=Impossible

The classification of these Trills and Tremolos has been based upon the degree of proficiency of the average soloist of Army Bands.

It is frequently contended that the Oboe and Clarinet do not sound well in unison. A very excellent example of this combination may be heard in the opening bars of the "C Major Symphony," by Schubert. A very important function of the Oboe is to give edge or point to the wood wind or brass in a figure of accompaniment. An example of the Oboe and Flute in duet, from the Overture to "William Tell" (Rossini) is given on page 52.

The following extracts illustrate the varied capabilities of the Oboe as a solo instrument :—

(a) This is taken from Schubert's Overture "Rosamunde" and is an example of *legato* playing.

(b) This extract, from the Ballet Music to "William Tell," by Rossini, is a rare example of a quick tonguing passage for the Oboe. It is, of course, very difficult and needs the greatest refinement of execution.

(c) Here Grieg has called upon the Oboe to depict morning in the Suite "Peer Gynt." The Oboe excels in all kinds of *pastorale* passages.

(a) *Andante Solo*


(b) *Allegretto Solo*


(c) *Allegretto pastorale Solo*


In extract "A," which follows, the Oboe is answered by the Flute, which has the same pastorale passage an octave higher; but in extract "B" the Flute and Oboe are employed in duet, the Flute in contrast having a very florid but effective part. The light Military Band accompaniment is also shown.

(Extract A.) Overture "William Tell"

Rossini

Andante $\text{♩} = 76$

Flute.

Oboe.

Band.

Flute.

Oboe.

Band.

(Extract B.) Overture "William Tell"

Rossini

Andante

Flute.

Oboe.

Band.

Flute.

Oboe.

Band.

rall.

Flute.

Oboe.

Band.

THE COR ANGLAIS

This instrument, the alto of the Oboe family, is sometimes called the English Horn. It is not English, and is no relation to the Horn as such. It is pitched in F, and is made of rosewood, cocuswood or ebonite. It is both longer and wider than its relative the Oboe, and consists of five separate pieces.

The Reed is larger than the Oboe reed, but otherwise similar in construction. Unlike the Oboe, the reed does not fit directly into the instrument. In this case it is adjusted on to a—

Crook, which is a cylindrical piece of metal bent over to form an arch. This crook is fitted into—

The Top Joint which, as in the case of the Oboe, forms with—

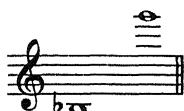
The Bottom Joint the main construction of the instrument, and on to the bottom joint is fitted—

The Bell, which is of globular shape.

Compass.—Most instruments



Occasionally



, but very rarely.

Chart of Fingering
History
Overblowing
Hexachord
General Mechanism

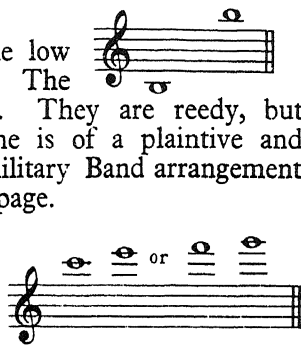
} Similar to that of the Oboe.

TONAL REGISTERS

The various tonal registers of the Cor Anglais, however, are different from those of the Oboe.

The Low and Medium Register.—From the low B \flat for two octaves the tone is beautiful. The lower notes especially are thick and vibrant. They are reedy, but wonderfully expressive and eloquent. The tone is of a plaintive and mournful character. See the solo from the Military Band arrangement of “Le Carnaval Romain,” by Berlioz, on next page.

The High Register is seldom used or written for. The notes are thin and of very inferior quality, in which case it would be preferable to play the desired notes on the Oboe. (For relative pitch, etc., see page 16.)



USES IN THE MILITARY BAND

The Cor Anglais is not a recognised Military Band Instrument, but there is no reason why it should not be used more than it is. The music for the Cor Anglais is very often written with that of the Oboe. The performer having the option as to which part he plays, providing that sufficient rest and opportunity be given to him in which to change from one instrument to the other, the Cor Anglais could be used quite easily. Any performer of average ability on the Oboe should be able to play the Cor Anglais. The solo from “Le Carnaval Romain” is an illustration of a Cor Anglais solo played on the Oboe. It is much more effective when played on the correct instrument.

Two examples of the use of the Cor Anglais in the Military Band :—

Overture “Le Carnaval Romain”

Berlioz



Overture “William Tell”

Rossini



THE CLARINET

Fr. Clarinette. *It.* Clarinetto. *Ger.* Klarinette.

The Clarinet, being the most important instrument used in the Military Band (as the Violins are to the Orchestra), it would seem to have been advisable to have dealt with it in the first chapter on instruments. This, however, would have been contrary to the usual practice adopted in Military Bands, which is to take the instruments in their score order—*i.e.*, Flute, E \flat Clarinet, Oboe, Solo Clarinet, etc. (*See Part II.*)

There are various kinds of Clarinets in use—some more than others—from the Soprano Clarinet in E \flat to the Contra Bass Clarinet. The two definitely in use in Military Bands are the E \flat and the B \flat .

The B \flat Clarinet is a wind instrument of about 26 inches in length. The E \flat is about 18 inches in length. They are usually made of wood (cocuswood or black African) or ebonite—*i.e.*, vulcanised rubber. They have been made of ivory, metal and even glass.

It is a single-reed instrument and a cylindrical reed pipe, having the properties of a “stopped pipe.” It is made up of five parts, (a) to (e), as follows :—

(a) *The Mouthpiece.*—The following appurtenances are used in connection with the mouthpiece.

The reed—*i.e.*, a single piece of cane—which is bound to the mouthpiece by means of a metal ligature.

(b) *The Barrel Joint*, which is used for tuning. This section forms the connecting link between the mouthpiece and

(c) *The Top Joint*, which contains the three upper holes of the hexachord, also the thumb hole (left hand) and various keys, etc.

(d) *The Bottom Joint* contains the three lower notes of the hexachord, the thumb rest and various keys. This joint in turn fits into

(e) *The Bell*, which is a cone-shaped fixture.

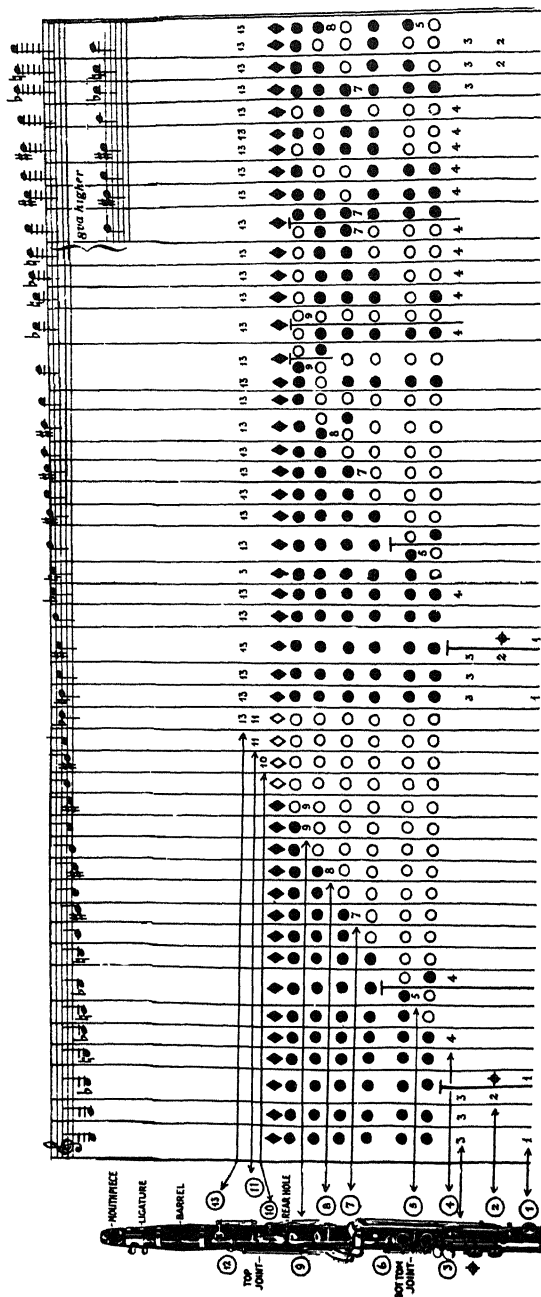
The Bore of the Clarinet is cylindrical, being punctured with six holes on the “face,” forming the natural scale of the instrument, another hole (the thumb hole) being at the back. The Clarinet overblows in the 12th. The system of fingering therefore differs from that of the Flute, Oboe, Saxophone and Bassoon. The lowest natural note of the Clarinet

is G. 

The notes lower than this G are operated by means of the small fingers of each hand.

CHART OF FINGERING, 14 KEYED CLARINET

(The "Clinton Model" Clarinet is dealt with on p. 71.)



● Indicates the hole being closed.

○ Indicates the hole being open.

◇ Indicates the Thumb hole (in the rear of Clarinet) to be closed.

⊕ Indicates the Thumb hole (in the rear of Clarinet) to remain open.

⊕ Indicates the use of Patent C♯ key.

Figures indicate use of keys, so marked

It will be observed that keys Nos 6 and 12 are not included on the chart.

The reason for this is—

No. 6 is automatically brought into play by the fingers of the Right hand covering the holes. This key is sometimes called the Spectacle or Ring Key.

No. 12 is only used for the purpose of trills, etc

The Method of Sound Production.—The performer places the mouth-piece between the lips, and by the pressure of the lips and breath on the reed, vibrations set up the air column within the pipe, and sound is produced.

HISTORY

The name Clarinet is evolved from two Italian words—*Clarino* and *Charina*—the former being Italian for Trumpet, which played the high part, and the latter was the name of an obsolete reed instrument. As a matter of fact, in some countries the Clarinet is still spelt Clarionet, and is widely known by this name in most American wind band combinations.

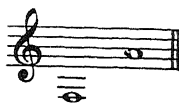
As in the case of the Flute and Oboe, the use of the Clarinet has been traced back to the days of the ancient Egyptians. The Greeks in their Pythian games used a crude form of Clarinet, the reed of the instrument being very stiff, hard and brittle. This produced a most hard, rasping, penetrating and metallic noise. Another ancient instrument in use at this time was called the Calamus, after the Latin word meaning reed. It was known in various countries under the names of Schalamuse, Schalma, Shawn and Chalumeau. An interesting fact emerges from the comparison of these names. If the student will turn back to the historical notes on the Oboe, he will observe a striking similarity between the above names of ancient Clarinets and with those of the forerunners of the Oboe.

This is explained by the fact that various countries or provinces had their own different names for the various instruments, and so long as the particular instrument claimed parentage from the old keyless pipe—*i.e.*, such as the Flutes, Oboes, Bassoons or forms of Clarinet—the name was very similar to that of one from another family of instruments. The Clarinet as a musical instrument may be said to have been invented by J. C. Denner, of Saxony. For centuries it was merely a hollow piece of wood about 20 inches in length. It did not possess a bell and was generally made in one piece. The bore was also very imperfect. From this period dates the evolution of the modern Clarinet, its progress being traced as follows :—

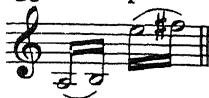
1690 J. C. Denner, of Saxony, added the speaker key (one of the most important inventions in the history of the instrument). This addition allowed for the execution of hitherto difficult or impossible passages. With the addition of this key the Clarinet now possessed five keys. At this period the lowest note procurable on the instrument was F \sharp .



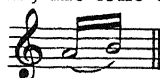
The instrument, having nine successive holes, possessed a diatonic compass from F to A.



1720. J. Denner (son of J. C. Denner) transferred the speaker key from its then imperfect position to a position near the mouthpiece. Denner also added the bell, which did not, however, alter the instrument fundamentally.
1789. Stadler, of Vienna, added the sixth key. At this period metal keys were being experimented with.
1810. Muller, of Germany, commenced making 13-keyed Clarinets. The semi-tones were improved. Intonation was much improved and facility of execution was greatly advanced; performance of scales, chromatic passages and arpeggios simplified.
1844. Antoine Sax improved the Clarinet bore and the key mechanism. Sax invented the ring key which did away with an awkward side key.



The same year Sax is said to have invented a low E \flat key, but it was never taken up seriously. Of recent years an attempt has been made to revive this key, as its use does away with the B \flat on the break, the tone of which is very weak. The invention of the A \sharp and B \sharp shake key is also attributed to Sax.



The late Mr. Clinton, of London, who was a brilliant performer on the Clarinet, and professor of the instrument at the Royal Military School of Music, Kneller Hall, patented the "Clinton Model." This was an improvement on the "13-keyed model," and it embodied a number of the Klose-Boehm improvements.

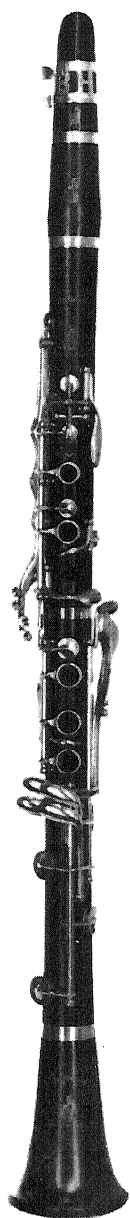
The following are other models, but they are not extensively used or even known :—

" Gomez-Boehm "

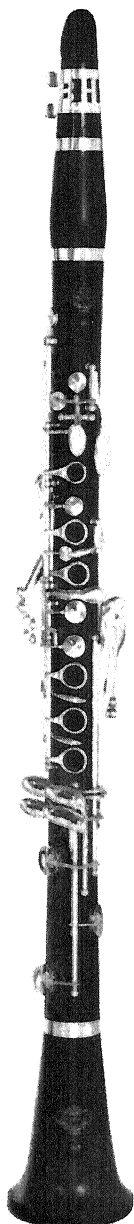
" Muller-Barmann "

The Clarinet has evolved through these various stages, until now we have instruments from the 13-keyed model to that of the modern Boehm with 24 keys, giving it the extensive range of 45 notes.

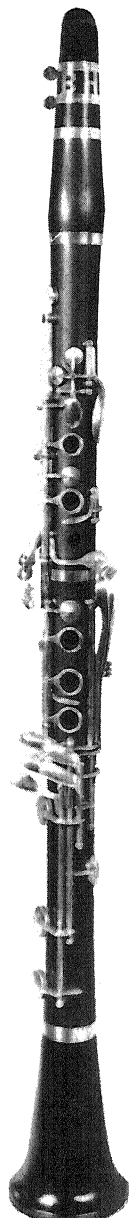
PLATE V.



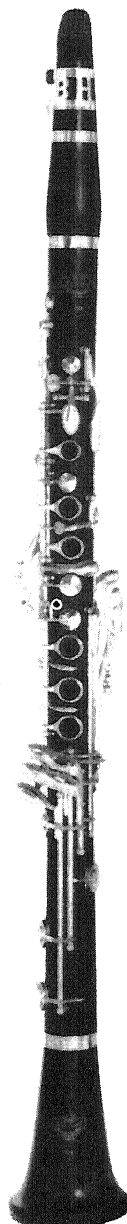
CLARINET
17 Key 6 ring



CLARINET
18 Key, 7 ring

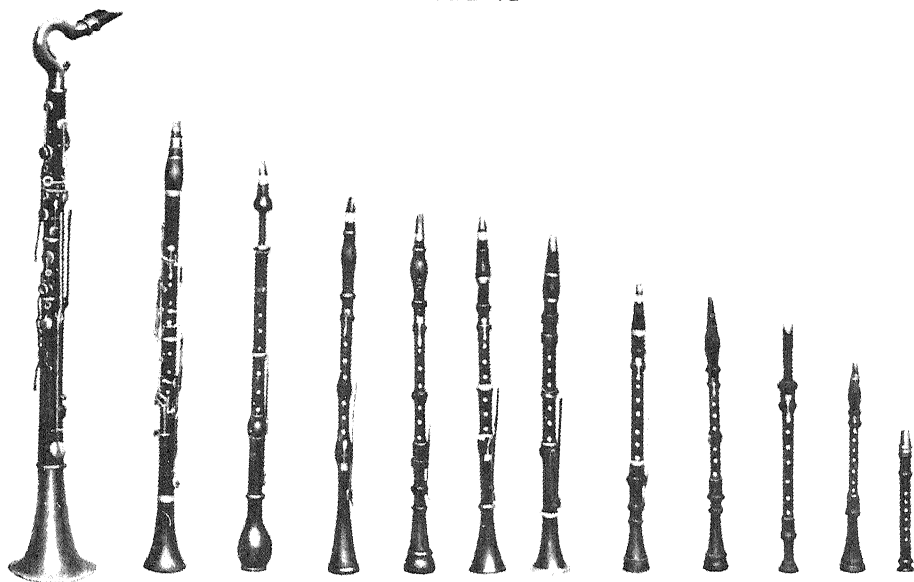


CLARINET
19 Key, 6 ring

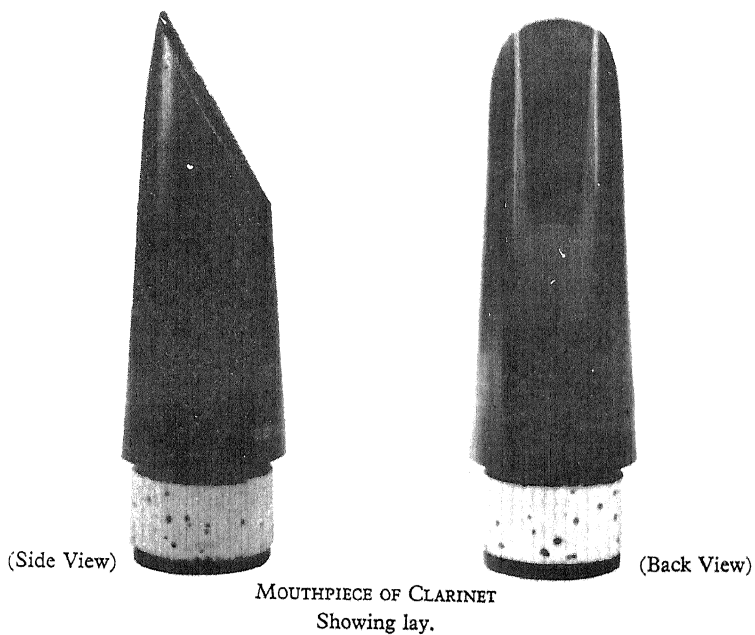


CLARINET
20 Key, 7 ring


PLATE VI




EVOLUTION OF THE CLARINET FROM THE EARLIEST FORM TO THE PRESENT DAY
(For present-day types see Plate V.)




TECHNICALITIES

Compass :—  representing the extreme compass, but

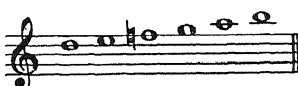
the general playing compass is :—  However, all the notes to the extreme C \sharp are possible.



Hexachord. 

The above notes are obtained without the use of keys and are the natural notes of the instrument.

The notes lower than the given G are obtained by means of keys operated by the little fingers. 

The hexachord on the Boehm Clarinet is :— 

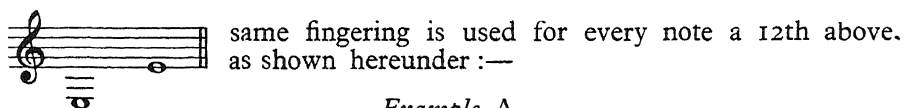
the twelfth above being :— 

The performer, on leaving the last note of the hexachord, E \sharp ,  must use a key to obtain the next semitone, F. 

This does not apply to the Boehm System. On it the player leaves the thumb (left hand) on the thumb hole and the F is obtained.

Overblowing.—(This term has already been explained in the chapter on Flutes.)

The Clarinet overblowing in the 12th, the system of fingering will differ very much from that of the Flute, Oboe, Saxophone and Bassoon ; consequently we find that for the first octave of the Clarinet, viz., the

*Example A.*

It will be observed that the $F\sharp$ and $C\sharp$ are bracketed, also that five notes (*see* Example B) and their corresponding 12th (*see* Example C) have been omitted from Example A, the reason for this being—

In the case of the lower notes given in Example A, the performer raises the “Speaker Key,” and the upper series of notes is obtained. In Example B we are confronted with a different system of fingering. The notes given in Example B and Example C, although the latter are the corresponding 12ths of the former, are not fingered by the same method.



For instance, take $G\sharp$



and its 12th.



Those two notes are not fingered in the same manner. $G\sharp$ is the open note of the instrument, but the $D\sharp$ is not fingered open. (*See* Fingering Chart, p. 57.)

Referring to $F\sharp$ and $C\sharp$ which are bracketed in Example A, these notes may be fingered the same, but there is an alternative method, and it is optional which is adopted, it being left to the discretion of the performer as to which method produces the best tuning note.

In the case of the Boehm Clarinet there is no alternative. (*See* Fingering Chart, p. 68.)

TONAL REGISTERS

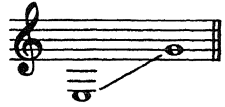
Every degree of the register is excellent, with the exception of half a dozen notes. The qualities of the tonal registers differ considerably from each other. Further remarks on this subject will be made later.

When exception is taken to a few bad notes, it does not necessarily mean that the notes are definitely bad and should not be written for, but what is really intended is that the notes in question are inferior in volume of tone in comparison with the others.

For the purpose of tone colour, the compass of the instrument is divided into five distinct tonal registers :—

1. The Chalumeau (or low) register.
2. The Break (or throat).
3. The Clarion.
4. The High.
5. The Extreme.

1. *The Chalumeau*. — This is a beautiful register, the tone is rich, thick and full and of a 'cello-like quality. Being flexible, rapid passages and arpeggios can be executed with ease. In the Military Band it is particularly well adapted for smooth legato melodies in combination with the Saxophone, Bassoon and Euphonium. The notes speak well and great volume can be obtained. The lower notes can be played "fortissimo" to an amazing degree. No wind instrument can compare with the Clarinet for the manner in which a "fortissimo" can be followed instantly by a whispering "pianissimo."



A bad note of this register is C#.

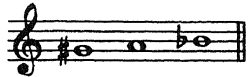


Examples illustrating the capabilities of this register are given on pages 81-83.

2. *The Break*.



The weak notes
being :—



These notes are really defective in tone, having a weak and nasal sound, and are the worst notes on the instrument. Execution in this register is bad, as the performer has to use every finger to obtain B \sharp , after first using one finger and thumb to obtain the B \flat .

If the following passage were written for the Clarinet, it would be advisable to double it with the Flute, Oboe, E \flat Alto Saxophone, or any other instrument in the compass, where the passage would be easy to play. This passage is both awkward and difficult for the Clarinet, and has been specially written to illustrate the advisability of doubling with some other instrument.

A close study of the following will show how easy it becomes when transposed for the other instruments.

B \flat Clarinet.



The Flute or Oboe.



This will sound in unison with the B \flat Clarinet.

E \flat Alto Saxophone.



The above will also sound in unison with the B \flat Clarinet.

Another point of interest concerning the "Break" is that the notes can be played so quietly that it is almost impossible to hear them.

3. *The Clarion.*

Execution in this register is easy and is commonly known as a "free" register. Once the hands are in position they do not change, the fingers just dropping to any desired note. The tone is sweet and velvety and contains, perhaps, just one weak note—i.e., G \sharp above the stave similar to that of its 12th below—i.e., C \sharp below the stave.

Passages of great rapidity may be written for in this register and arpeggi and scalic passages are easy. Tonguing (single) up to a certain speed is easy.

Performers of exceptional ability can double and triple tongue with advantage.

Single tonguing in semi-quavers is easy, e.g. :—



Beyond this speed the results are not satisfactory. This applies to any note from E \flat to C \flat .



The Clarion register is perhaps the most expressive of the whole instrument, each note being capable of equal tone. The various solos given at the end of this chapter will illustrate the style of writing required for this register.

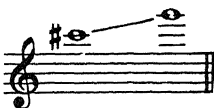
The whole of this register may be taken as an example of the fluency of the Clarinet in playing a chromatic scale. The position of the hands and embouchure does not change; in fact, the Clarinet would be superior to the Violin in this passage, from a point of pure intonation.



It is quite a simple matter for the whole of the above passage to be played on the Clarinet in one breath, giving equal pressure and length to each note.

4. *The High Register.*

From a Military Band point of view, this is a very useful register. Mention of this has been made before in the paragraph on overblowing.



The Clarinets being the Violins of the Military Bands, and with most of their performances taking place in open-air bandstands, it is obvious that this register must be frequently employed, because of its carrying power.

5. *The Extreme Register.*

The top notes are not used very much and the extreme notes, B \sharp and C, are shrill and piercing. They are occasionally used in solo work, concertos, and in cadenzas, but are very seldom to be met with in Military Band work.



USES OF THE CLARINET IN THE MILITARY BAND

The Clarinet is pre-eminent in the Military Band and occupies the same position in this combination as the Violin does in the Orchestra.

In the latter combination there are three distinct sections, viz. :—

(a) Strings. (b) Woodwind. (c) Brass.

In the Military Band there are two :—

(a) Woodwind. (b) Brass.

The above do not include the percussion.

As the purpose of the Military Band is to reproduce, where possible, that which can be played by the Orchestra, it will be seen that more work falls to the lot of the instruments of the former combination.

The Clarinet, with its extensive compass, is used to serve many purposes. In the normal band of 25 performers, the distribution of B \flat Clarinets would be as follows :—

2 Solo Clarinets, 1 Repiano, 2 Seconds, 2 Thirds.

The Solo and Repiano Clarinets generally play the melodic parts and the second and third the accompaniment. The solo Clarinets must be regarded as the leading Violins, the repiano Clarinets as the first Violins, the second Clarinets as the second Violins, and the third Clarinets as the Violas.

The part for the Clarinet is always written in the treble clef.

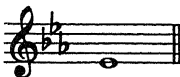

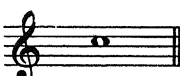
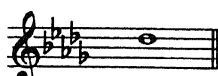
The tone of the Clarinet, being more neutral than any other wind instrument in the Military Band, doubles very well with any other instrument.

Although the Clarinet is a useful solo instrument, great care must be taken in arranging for it.

The student is reminded that the Clarinet in the hands of a good performer has almost the range of the Violin.

An interesting point arises out of the choice of the B \flat Clarinet in the Military Band in preference to the A Clarinet. The former was chosen because it possesses a brighter and more beautiful tone. Another point in its favour is its general utility and suitability for playing in the usual keys employed in Military Band Music.

The following will illustrate the foregoing paragraph :—

<i>Band in key of</i>	<i>B\flat Clarinet</i>	<i>A Clarinet</i>
		
		

On account of the Clarinet's brilliance it superseded the Oboe as the premier instrument in the Military Band many years ago.

In arranging for the Clarinet in a Military Band from an Orchestral or Pianoforte Score, there are various difficulties to be overcome, such as :—

The modification of Violin passages.

The modification of Piano figures.

The modification of Harp figures.

Long staccato passages for Strings

Double stopping.

Tremolos (String and Pianoforte).

Spring bowing.

Full details of this will be dealt with in Part II, "Arranging for the Military Band."

CHART OF FINGERING FOR THE BOEHM SYSTEM CLARINET



- — Thumb hole to be open.
 ■ — Thumb hole to be closed.
 ○ — Finger hole or place to be open.
 ● — Finger hole to be closed.
 Figures indicate the keys or levers.
 $\frac{1}{2}$ — Not a good note.



Continued over

THE BOEHM SYSTEM CLARINET

The system of fingering which Boehm applied to the Flute so perfected the instrument, both in intonation and execution, that it was soon applied to other reed instruments.

In 1839, L. A. Buffet exhibited a Clarinet in Paris constructed upon the same system as the Boehm Flute. He later applied for the Patent, which was granted in 1844 and numbered No. 16036, Buffet. He also in the same year applied the system to the Oboe.

Like the Boehm Flute, it was some years before the new Boehm System Clarinet became popular, mainly because the instrumentalists were either too biased, or too advanced in years, to learn the new system of fingering, when they could get on moderately well with the standard type.

It was not until performers came along who had been taught the system from childhood, and could play passages with ease on the Boehm System that were either difficult or impossible on the Simple System, that the new model became more and more popular. This was especially so in France.

The Boehm Clarinet is much more dependable, and more equal in tone in all its registers, than any other model Clarinet. It is built upon the principle "one finger, one note." That is to say, keys are duplicated to obviate the combined or acrobatical movement of the fingers.

Passages will be given from standard works which are met with every day by the average clarinet player, showing the advantage of the Boehm Clarinet over other models.

- (a) "The Bamboula" Rhapsodic Dance S. Coleridge-Taylor



- (b) "The Bees' Wedding" Mendelssohn



The same fingering occurs, of course, in the 12th below.



The foregoing passages are almost impossible on both the Clinton and Simple System models, as it is most difficult for the little finger of the right hand to move from the E \flat to the C key at the speed indicated. On the Boehm Clarinet there is an additional C key, manipulated by the little finger of the left hand, which greatly facilitates the fingering of the passage.

(c) The Boehm Clarinet fingering of the "F" in the following example (*i.e.*, with the thumb of the left hand only) makes easy this passage, which would be difficult on the Simple System.



(d) Overture "Fingal's Cave" Mendelssohn



This extract will show the advantage of the Boehm fingering of "F" over that of the Simple System owing to the fact that on the latter model two or more fingers are in use at one time, whereas on the Boehm the first finger of the right hand only is used.

(e) Selection "Oberon" Weber

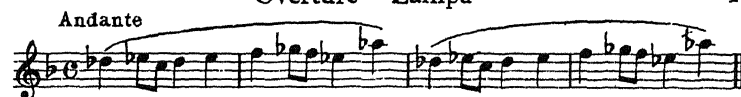


Here, on the Boehm Clarinet, the "long B \flat " key is used, making the passage more simple without affecting the intonation. It is produced by the first finger of each hand, with thumb hole closed and speaker key open.

In conclusion, too much stress cannot be placed upon the fact that the Boehm Clarinet has a distinct advantage over the Simple and Clinton Models, with its principle of "one finger, one note," and its equality in tone through all its registers.

Difficult Passages for Boehm System Clarinet.

Overture "Zampa" Herold



March "Rakoczy" Berlioz



THE CLINTON MODEL CLARINET

This Clarinet has the following distinctive features in addition to the Barret Action on top joint and the extra C \sharp key. The middle tenon passes beyond the (C—G) hole to enable the C \sharp and G \sharp hole to be placed in the best position for intonation and freedom. The hole speaking the forked F is carried lower down the instrument than usual, and the hole, being further assisted by a vent key, is available also for the low B \flat ; both these notes, the B \flat and F, therefore speak as well with the forked fingering as with the cross key. To preserve an easy and natural position for the finger, the forked F hole is covered by a padded cup to which a finger plate is attached. In addition to the long (usual) B \flat trill on the top joint there is a long B \flat trill. The G \sharp or A \flat key on the top joint crosses the A \flat key, and is so arranged that it can be taken either with the 1st or 2nd finger. The Clarinet is fitted with four rollers.

The following passages will show the special advantages of the "Clinton Model" Clarinet.

For the use of the patent C \sharp key—keep down the B \flat key for these trills and passages.



For the use of the Barret Action—keep the lever for the 1st finger of the right hand down in the execution of these passages.



For the fork on cross B \flat and F (perfect notes).



For the combination of the fork B \flat and F, and the Barret keys.



The A \flat and G \sharp in these and similar passages ought to be taken with the first finger of the left hand.



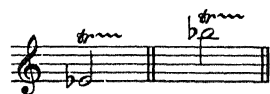
These trills are produced by trilling the middle finger of the right hand, whilst the 4th or E \flat key is held down by the little finger of the same hand.




Impossible trills on the Simple System, perfected on the Clinton Model.





Imperfect trills on the Simple System perfected on the Clinton Model.



Other advantages of this system are the following trills :—

A and B \flat  Open the A key and trill the lower side key for the 1st finger of the right hand. This is much easier than the usual way with the thumb.

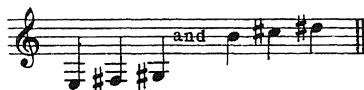
A and B \sharp  Open A and trill lower side key.

B \flat and C.  Open A and thumb key, and trill both side keys.

If the ordinary scale fingering is preferred it can be easily arranged by a slight mechanical addition.

DETAILS OF MECHANISM AND FINGERING

Patent C# Key.—This is a key operated by the little finger of the left hand. It simplifies the move from



The following passage is an example of its use.



A Forked Passage.—From Overture “Fingal’s Cave” by Mendelssohn

Forked notes marked ×



The “forked” notes are—



Another useful fork is the note “C” fingered thus—



The following is an example of its use :—



Forked notes marked ×

Leaps to Avoid.—Owing to the manoeuvring of the little finger, this is difficult to slur.



The Barret Action.—An additional key on the top joint of the Clarinet. It is manipulated by the first finger of the right hand ; used for



and dispenses with “forks.”

Impossible Trills (14-keyed).



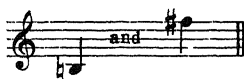
Difficult Trills (14-keyed).



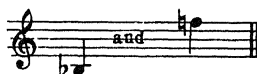
The “Speaker” Key is brought into use for and upwards.



The Spectacle or Ring Key.—Used for perfecting the intonation of



The Clinton Vent “F” and “B \flat ”.—Used for perfecting the intonation of the forked



A Difficult Passage.—This would, of course, depend upon the tempo, articulation, and the register of the instrument (in which it is written).

This extract would be difficult at a quick tempo.



A rapid passage surrounding the “Break” of the instrument is at any time undesirable. In the case of Military Band arranging, it would be advisable to write the passage for the E \flat Clarinet.

Arpeggios, if slurred and tongued alternately, are quite comfortable.

TABLE OF RELATIVE PITCH OF VARIOUS CLARINETS

	Written Compass	Sounding
E \flat Clarinet.		
C Clarinet.		
B \flat Clarinet.		
A Clarinet.		
E \flat Alto Clarinet.		
Corno di Bassetto (Tenor Clarinet in F).		
Bass Clarinet in B \flat . (Also in A).		
Pedal or Contra Bass Clarinet in B \flat .		

The following examples—taken from Military Band arrangements—are intended to illustrate the various styles of Clarinet technique and their stages of difficulty.

Seven Extracts from “Jupiter”—“The Planets” Suite Holst

(A) Allegro giocoso

(B) Allegro giocoso

(C) *Allegro giocoso*
mf *mf* *accel.* *cresc.*

(D) *Presto*
fff non legato

Allegro giocoso
ff

(E)

Allegro
ff

(F)

Allegro
pp 1

The image displays five musical extracts for piano, each on a grand staff (treble and bass clefs).
 Extract (C) is in 2/4 time, marked 'Allegro giocoso'. It begins with a treble staff containing two measures of chords (Bb2, Bb2) and a dynamic marking of 'mf'. The bass staff continues with a series of eighth-note chords, marked 'mf' and 'cresc.', ending with an 'accel.' marking.
 Extract (D) is in 2/4 time, marked 'Presto'. It consists of a single staff with eighth-note chords, marked 'fff non legato'.
 Extract (E) is in 3/4 time, marked 'Allegro giocoso'. It consists of two staves of eighth-note chords, marked 'ff'.
 Extract (F) is in 3/4 time, marked 'Allegro'. It consists of two staves of eighth-note chords, marked 'ff'.
 Extract (G) is in 3/4 time, marked 'Allegro'. The treble staff contains five measures of chords (E#2, E#2, E#2, E#2, E#2) marked 'pp', followed by a rest marked '1'. The bass staff contains a series of eighth-note chords, marked 'pp'.

Regarding the examples on the preceding page :—

- A.—Requires clean movement of the tongue and the fingers at the same time.
- B.—A similar case to example A, but also requires a quicker change in the fingering.
- C.—Gives example of rapid tonguing in bars 1 and 2. (Flutter tonguing would be preferred.) Bars 3, 4 and 5, etc., require clean tonguing and finger movement.
- D.—The tempo is very quick. Rather awkward to play nicely at the required speed. Also the F \flat and B \flat require “Forking” on the Simple System.
- E.—This would be considered very difficult at the speed indicated, in conjunction with the constant reiteration of the same bar.
- F.—Very difficult by reason of the fast tempo, the continuous repetition of the same bar, and the effort to obtain the high G \flat and F \flat .
- G.—The quick slur from the G \flat to A \flat in bar 7 and onwards—for the number of bars and the tempo—makes this difficult.

It will be noticed in the two following examples that they employ all the various registers of the Clarinet. Both require a high standard of proficiency.

Two examples from “Mars”—“The Planets” Suite Holst

(A) *Allegro*
p *sempre stacc.* *cresc.*

(B) *Allegro*

These examples from Rimsky-Korsakov's "Scheherazade" furnish us with :—

- A.—an excellent example of the fluency of the Clarinet.
- B.—The use of the instrument in the Chalumeau register.
- C.—Chromatic passages.

(All these examples are comparatively easy for a good performer.)

(A)

(B)

Andantino

Allegro

(C)

The above extracts by permission of Editions M.P. Belaieff

Extracts from Overture "Oberon"

Weber

Allegro con fuoco

(A) 

(A) 

Three examples of very delicate and staccato playing from "The Midsummer Night's Dream," Mendelssohn. In all these extracts very short and crisp tonguing is needed.

Allegro vivace

(A) 

(B) 

(C) 

Two examples of sweeping running passages for the Clarinet.

(A) Overture "Zampa," Herold. (B) First Suite in E \flat for Military Band, Holst.

Allegro vivace

(A) 

Allegro moderato

(B) 

Two examples from "The Bees' Wedding," Mendelssohn, both being difficult, the first two bars of B being almost impossible on any system except the Boehm. (See chart of fingering, p. 22.)



Two examples of arpeggio playing from Overture "Cockaigne," Elgar, and the Overture "Tannhäuser," Wagner.

Overture "Cockaigne"

Elgar



Overture "Tannhäuser"

Wagner



The following passages show a contrast in style. The first is the Clarinet Solo from Mendelssohn's Overture "Fingal's Cave," and is a typical example of legato playing.

The passage from the Overture "Zampa," by Herold, is in direct contrast. The greatest refinement of execution is required, the player imitating the spiccato of the Violin.

Overture "Fingal's Cave"

Mendelssohn



Overture "Zampa"

Herold



THE E \flat CLARINET

The E \flat Clarinet, although a member of the Clarinet family in the Military Band, is regarded and treated, from a tone colour point of view, as belonging to the group of the three higher woodwind instruments, which are :—

The Flute and Piccolo.

The Oboe.

The E \flat Clarinet.

It is constructed similarly to the B \flat Clarinet, consisting of the same number of joints, although in comparison smaller in size. Its length is about 20 inches, but there is a difference of about a $\frac{1}{4}$ inch between a sharp pitch and flat pitch instrument.

The following points, which are peculiar to the B \flat Clarinet, are identical with the E \flat Clarinet, and reference should be made to the previous chapter :—

Tone Production.

The Bore.

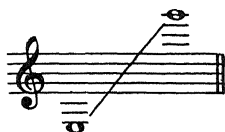
Overblowing.

System of Fingering.

Trills and Tremolos.

Hexachord.


The Compass.



Every note on the instrument is easy to produce with the exceptions noted hereunder :—



Each note “ speaks ” well and possesses a good tonal quality.

Any note above  is inclined to be shrill and piercing if not played artistically.

TONAL REGISTERS

The registers are technically similar to those of the B \flat Clarinet, but differ in quality, which is due to the difference in length of the two instruments. For example, the Chalumeau register of the E \flat Clarinet does not possess the full sonorous tone of that register on the B \flat instrument.

In comparison with the B \flat Clarinet the E \flat Clarinet requires more delicate and refined playing, otherwise the tone becomes harsh and blatant.

USES IN THE MILITARY BAND

Remembering the pitch of the instrument it will be realised how useful it is in assisting the B \flat Clarinet on high notes, and continuing high scalar passages, etc.



The following example shows how when weak trills or impossible tremolos for the B \flat Clarinet are transposed for the E \flat Clarinet, they usually become quite good and practicable.

B \flat Clarinet

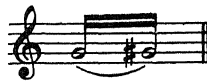


(Weak owing to little finger shake.)



(Impossible.)

E \flat Clarinet



(Strong.)



(Good.)

A close study of the Tables of Fingering and Shakes will reveal how useful this device really is.

Other examples are given :—



The “break” of the B \flat Clarinet strengthened with the E \flat Clarinet.



The "break" of the E \flat Clarinet being strengthened by the B \flat Clarinet.



The higher notes of the B \flat Clarinet being hard to sustain when played "pianissimo" are easily sustained by the E \flat Clarinet.

Further reference will be made to the E \flat Clarinet in Part II.

Examples from the Overture "Midsummer Night's Dream"

Mendelssohn

Allegro molto



Allegro

Overture "Tancredi"

Rossini



THE SAXOPHONE

The Saxophone, being both brass and reed, is a hybrid. It enjoys the distinction of being the most modern instrument in the Military Band, having little or no history to boast about.

There is a large variety of Saxophones, ranging from the Sopranino in E \flat to the large Double Bass in E \flat , B \flat or C.

DESCRIPTION

The Body.—This part is built in one piece and is a tube of brass, conical in shape. The bell turns upwards on all Saxophones with the exception of the two smaller members of the family. The body is pierced with 20 to 24 holes (the number varies according to the model), which are covered by keys. A side stud is fitted to the keys which cover the holes forming the hexachord to facilitate the stretch of the fingers.

The Crook is an arch-shaped piece of metal to which is fixed the mouthpiece. It carries the second octave key and a ring (which acts as a lever for this key). The Crook joins the Body of the instrument, and is made secure by a screw which tightens the socket.

The Mouthpiece functions in the same manner as the Clarinet mouthpiece, carrying the single reed and ligature. The reed protection cap is also carried here.

Tone Production.—Though the mouthpiece and reed of the Saxophone are similar to those of the Clarinet, the method of tone production is by no means the same.

The tight embouchure used when playing the Clarinet is entirely opposed to the loose "O" shaped embouchure, that is required to produce the true tone of the Saxophone. If the Clarinet embouchure is used, a thin reedy tone will be produced and not that round, full, mellow tone which is characteristic of the Saxophone.

Overblowing.—Being a conical pipe and blown by means of a single reed the Saxophone overblows in the octave.

The system of fingering is similar to that of the Oboe and Flute, but, as must be the case with a large conical instrument, the fingering is modified, according to the principles adapted by Boehm.

HISTORY

The Saxophone was invented by Antoine Joseph Sax in June, 1846, he having followed in the footsteps of his distinguished father, Charles Sax (1791-1865).

The father was an eminent musical instrument maker and inventor. He made Flutes, Clarinets, Bassoons and Serpents (now obsolete), the former two being awarded a gold medal for proficiency. He invented crooks, cylinders, pistons and a keyed harp, and he also perfected the Bass Clarinet.

He at one time held the post of musical instrument maker to the Belgian Court.

It is assumed that the now defunct Ophicleide (*see* plate XXVII), a keyed brass instrument with a cup-shaped mouthpiece, gave Sax (Jnr.), the idea of the Saxophone. It is worthy of note that the year before he patented the Saxophone he had invented the Saxhorn and Saxotromba (1845).

The Saxophone was gradually absorbed into the instrumentation of the French and Belgian Bands, where it has now been established for about 50 years. In British and American Bands it was less fortunate. At the beginning of the present century it was scarcely known, the reason for this being, perhaps, its imperfect mechanism and slowness of speech. To-day, these faults having been overcome, there is hardly a Military Band, either service or civilian, in both countries which does not include in its instrumentation two Saxophones, one E \flat Alto and one B \flat Tenor.

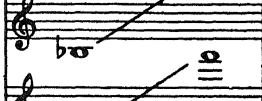
Although usually only two are found in British Bands, American Bands have from five to six.

It is the use of Sarrusophones, coupled with the large number of Saxophones, that gives the peculiar reedy quality to the Continental Bands.

Classical works are often performed by bands of Saxophones, which include every member of the family. For this purpose special arrangements are made, which often entail modification of the original.

A curious point about the Saxophone family is that though the larger members are very low in pitch, they are all written for in the Treble Clef

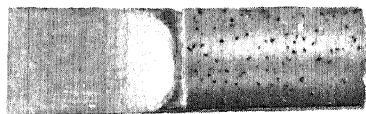
The following Table gives the complete family, showing the compass and actual sounds :—

	Written Compass.	Sounds.
Sopranino in E \flat .		
Soprano in C.		
Soprano in B \flat		
Alto in E \flat .		
Tenor in C.		
Tenor in B \flat .		
Baritone in E \flat .		
Bass in C.		
Bass in B \flat .		
Contra Bass in E \flat .		
Contra Bass in C.		
Contra Bass in B \flat .		

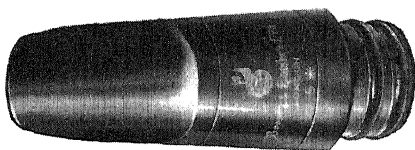
give basso

give basso

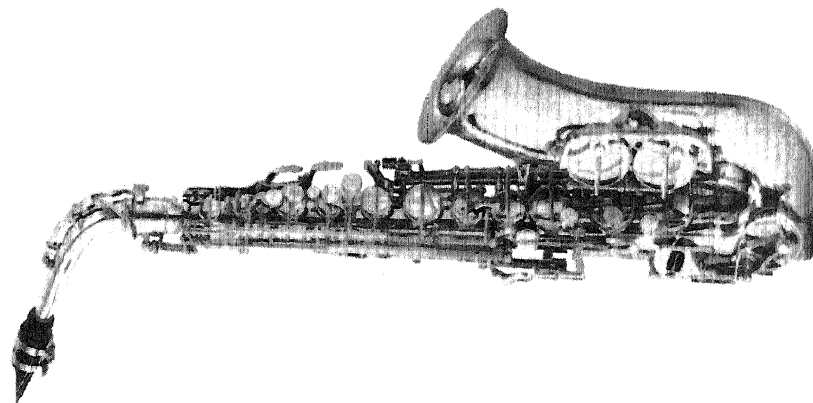
PLATE VII.



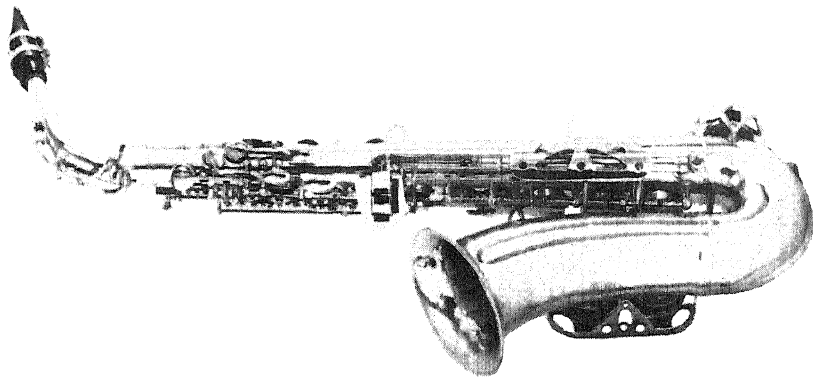
REED OF SAXOPHONE



SAXOPHONE MOUTHPIECE Showing Various Lays.

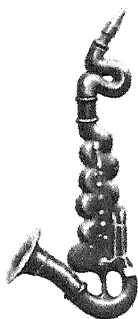


E♭ ALTO SAXOPHONE. (Front View)



E♭ ALTO SAXOPHONE. (Back View)

PLATE VIII



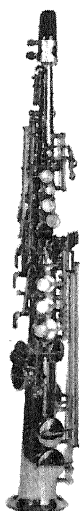
BASS CLARINET



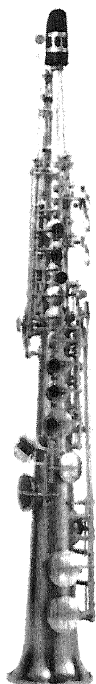
BASSET HORN



EARLY SAXOPHONE



SOPRANINO
SAXOPHONE



SOPRANO
SAXOPHONE



E \flat ALTO
SAXOPHONE

PLATE IX



TENOR
SAXOPHONE



BARITONE
SAXOPHONE

PLATE X



BASS SAXOPHONE

TECHNICALITIES

Compass.—Both the E \flat Alto and B \flat Tenor Saxophones which are employed in the Military Band possess a complete chromatic compass as shown :—



Reference should be made to the preceding chart for the actual sounds.

Hexachord.— On all Saxophones it is the same.

The above are the natural notes of the instrument and by placing the three fingers of each hand down upon the keys the note is obtained. For notes lower than this, keys are depressed by the little finger of each hand.

The lower notes are :—

A mute is commonly used nowadays. This is a ring of felt which is bound with tape and inserted into the Bell of the Saxophone. The mute greatly enhances the tone of the instrument, as, with other than experienced players the tone produced is at times inclined to be rough. This roughness is softened by the mute. When the low B \flat is required to be played the mute is turned sideways in the Bell ; this is the only note which is affected by the use of the mute.

SYSTEM OF FINGERING

The second octave of the Saxophone may be fingered in exactly the same way as the first with the addition of the octave keys, which are operated by the thumb of the left hand. On up-to-date models there is only one octave key, on others, two.

For alternative fingerings reference should be made to the chart :—



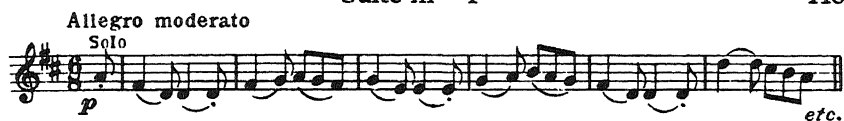
The open note of the Saxophone is C \sharp and its octave

On the B \flat Tenor Saxophone the note is unsatisfactory

The following prominent passages and solos for Alto Saxophone are given to illustrate the various styles of writing.

Suite in "F"

Holst



"Siegfried"

Wagner



"Tristan und Isolde"

Wagner



Overture "Le Roi d'Ys"

Lalo



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"L'Arlésienne Suite"

Bizet



"Mars" from "The Planets" Suite

Holst



"Jupiter" from "The Planets" Suite

Holst



Symphonic Poem "Scheherazade"

Rimsky-Korsakov



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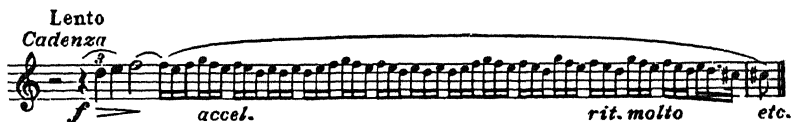
The following examples illustrate the use of the instrument in *arpeggio* and in more rapid passages :—

These three examples are from the Scherzo, "Midsummer Night's Dream," Mendelssohn, arranged for Military Band by the Author.



Examples of typical solos for the B \flat Tenor Saxophone :—

(a) to (c) are from the Symphonic Poem "Scheherazade"
Rimsky-Korsakov.



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From "Siegfried"

Wagner



From "Welsh Rhapsody"

German



By permission of the publishers, Messrs. Novello & Co., Ltd., who also publish the Military Band Arrangement.

Great use has been made by the Author of the B \flat Soprano Saxophone as a Solo instrument. The following illustrations show examples of its use :—

(a) Solo of the Aria type—

From "La Traviata"

Verdi



(b) Ballad—

"Chanson de Matin"

Elgar



(c) More florid type of Solo—"L'été"

Chaminade



THE BASSOON

Fr. Basson. *It.* Fagotto. *Ger.* Fagot.

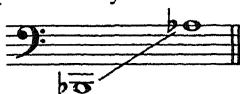
The Bassoon is the bass of the double reed family, which ranges from the small Musette to the large Contra Bassoon.

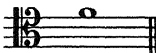
The length of the instrument, as assembled for playing purposes, *i.e.*, from the tip of the bell to the end of the butt, is about 50 inches ; if, however, the instrument were straightened out to form one long musical pipe it would measure approximately 8 to 8½ feet in length.

The Bassoon is made up of the following sections :—

(1) *The Reed*.—As in the case of the Oboe this is a double reed, but is about three times as large as the latter, and is fixed on to the narrow end of the crook.

(2) *The Crook*.—This is a hollow metal tube shaped similarly to that of a shepherd's crook. It is about one foot in length, and its end is covered by the reed. The end which holds the reed is about one-sixth of an inch in diameter, expanding conically to about $\frac{3}{8}$ inch, where it fits into the tenor joint. About one inch from the bottom of the Crook a small hole is pierced called by Bassoonists the "pin hole." This hole is covered by means of a key called the Crook Key, and is manipulated by the little finger of the left hand. This Crook Key is closed for all notes from the low B \flat to A \flat (an octave and a seventh) :—

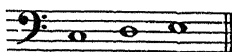


Also for all notes above F \sharp 

Thus the "pin hole" is open for only nine notes.

A curious fact arises out of the employment of the Crook Key. It is kept covered for 31 notes and open for about 9 or 10, consequently it is difficult to understand why the designers of the modern Bassoon have not applied the reverse principles of this key, *i.e.*, having the hole closed as in the case of the octave key on the Oboe and Saxophone, thereby allowing the little finger to be used for the trill keys adjoining the Crook Key, which cannot be done at present.

(3) *The Tenor Joint* is about 18 inches in length, and fits into one of the two butt sockets. In the centre of this joint three holes are pierced obliquely ; if they were pierced straight (as in the case of the Oboe, Flute and Clarinet) the distance between the finger holes would be far too great for the span of the fingers. These holes give the upper notes of the Hexachord.



By the side of these holes are others, which are covered by keys, the technical details of which will be dealt with later in this chapter.

CHART OF FINGERING FOR THE BASSOON SIMPLE SYSTEM

Labels on the instrument diagram:

- THE REED
- THE BASS JOINT
- THE CROOK
- THE CROOK KEY
- LOCKING PIN
- TENOR JOINT
- RELATION KEY
- TRILL KEY
- THE BUTT

Fingering Chart Legend:

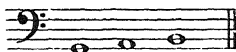
- Left hand**
 - 1st Finger: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20
 - 2nd Finger: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20
 - 3rd Finger: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20
- Right hand**
 - Thumb: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20
 - 1st Finger: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20
 - 2nd Finger: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20
 - 3rd Finger: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20

The chart contains numerous musical notations, including notes, rests, and fingerings, organized into columns corresponding to the instrument's keys and the player's fingers.

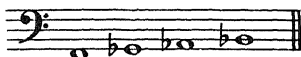
N.B.—The numbers stand for the corresponding keys
 The sign ○ signifies holes to be left open
 The sign ● signifies holes to be closed
 The sign ◐ signifies holes to be half closed
 The T denotes that the right-hand thumb is to close the hole
 For facilitating certain passages, two or more different fingerings of the same note are given, these are indicated by a brace
 Where more than one fingering is shown for any note, the first should invariably be tried

The following passage shows the use of the "Crucifix" key on Bassoon (From "The Creation," Haydn).
 Keep the usual fingering for F# and G# and open the "Crucifix" key G# G#

(4) *The Butt (or bottom)*, as the name suggests, is about 17 inches in length. It has a double bore in the shape of a "U," into which the Tenor Joint and Bass Joint fit. Three of the Hexachord holes are pierced obliquely, the notes being :—



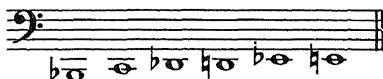
Opposite these three holes is pierced another hole, known as the "Thumb Hole," and it is covered by the thumb of the right hand. Near the bottom of the butt there are four keys which produce these notes :—



Contained also in this joint is a "U"-shaped tuning slide, which forms the bend of the bore. Access to this is gained through a little door at the bottom of the joint.

(5) *The Bass Joint*.—This is about 19 inches in length and fits into the butt, lying flat with the Tenor Joint. These two joints are held together by a pin or lock. In this joint five holes are pierced which are covered by keys and are manipulated by the thumb of the left hand.

The notes produced are :—



The Bell.—This is the top joint of the Bassoon, measuring about 14 inches in length and it fits on to the top of the Bass Joint. There is one hole pierced in it, nearly half way up, which is covered by one of the keys operated by the thumb of the left hand giving B \sharp :—



HISTORY OF THE BASSOON

The Italian and German names of the Bassoon are derived from the original resemblance of it to a faggot, literally a bundle of sticks, while the English and French names still used are more in keeping with its pitch, *i.e.*, the bass of the Oboe family. There is no questioning the fact that it is an instrument of great antiquity. Being associated with the Schalmey family the history of the Bassoon will naturally synchronize with that of the Oboe.

Early in the fifteenth century an Italian named Afranio was credited with the invention of the Bassoon. His invention, however, was a wind instrument known as the "Phagotum" or "Phagotus," but its technical

relationship to the Bassoon is very doubtful. For instance, it was not even blown by means of a double reed. An old Phagotum seen at a Continental museum was very different from the Bassoon as we know it. As a matter of fact the tone was produced by means of an automatic bellows. The only relationship which the author can discover lies in the name Phagotum or Fagott.

In the Chapter on the Oboe we discussed the ancient Pommers, Bombards and Brummers. These instruments are more likely to be the authentic predecessors of the Bassoon. The transformation of the Bass Pommer to the Bassoon took place during the sixteenth century. The Bassoon, more than any other instrument, has been improved by very slow and gradual alteration rather than by any sudden influx of inventive idea.

Even to-day the Bassoon is the most imperfect wind instrument in use, and with very capable instrumentalists there is always the danger than any note will "fly." The instrument demands the utmost personal attention and care. This is due probably, to a certain extent, to the oblique nature of the holes.

The Bassoon was used, of course in an imperfect form, by the ancient Greeks and Egyptians during the tenth century.

The ancient Greeks called it by the name of "Bombos."

The Bassoon was introduced into Europe during the twelfth century.

In 1550 a German named Schnitzer gained a reputation for making very fine bassoons.

The instrument was first introduced into the orchestra by Lulli in 1634.

USES IN THE MILITARY BAND

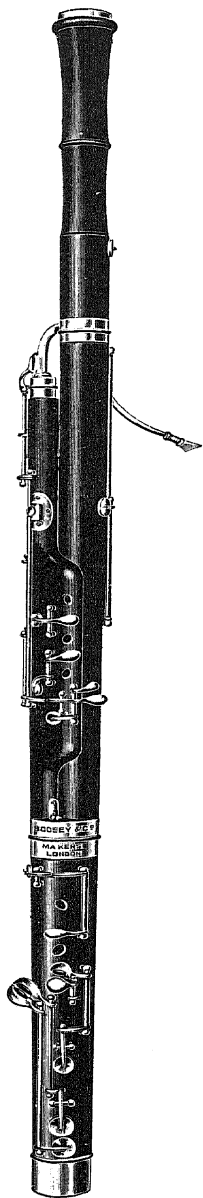
One Bassoon is employed in the official band of 25 performers. For indoor performances it forms a very satisfactory bass and foundation to the reed section. For outdoor performances, however, the Bassoon is weak. Any passage of importance or prominence should in this case be "doubled" with the Euphonium or Tenor Saxophone.

It is very useful for supporting the second and third Clarinets and the Saxophones in low arpeggios. It is also invaluable for the low harmonies in arranging, where the Euphonium or Bass Trombone would be too "thick." (This will be treated in Part II, Arranging.)

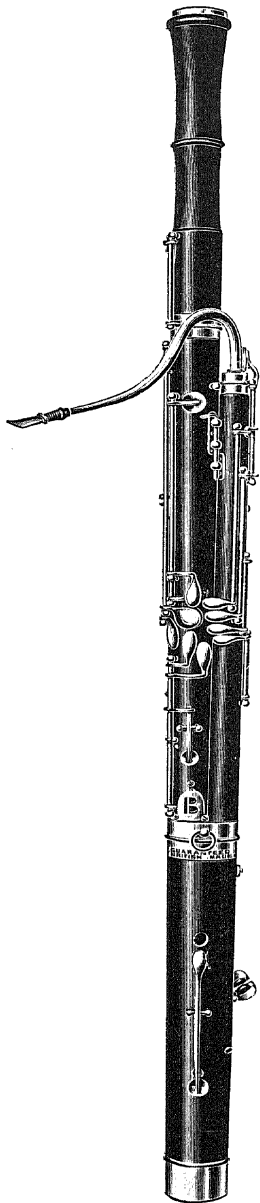
There is no wind instrument which can compare with it for Alberti Bass. Examples of its employment are given at the end of this chapter.

The tone of the Bassoon, being of such a sympathetic character, blends beautifully with most instruments; further, as the tone is of a Violoncello quality, it is an excellent substitute for that instrument during an indoor performance. It serves as a beautiful bass to the woodwind section of the band, and with the Oboe forms an excellent tone colour. It is also very useful in toning down the Brass to a more refined degree of playing.

PLATE XI

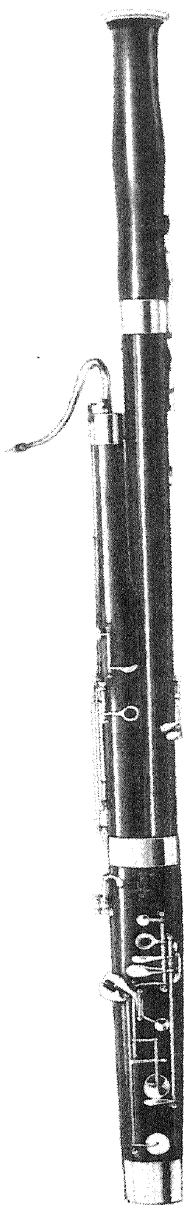


FRENCH OR SIMPLE SYSTEM BASSOON
(Front View)



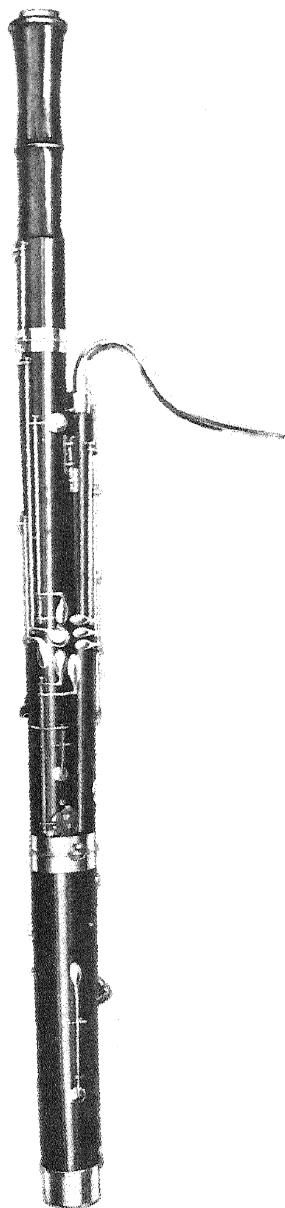
(Back View)

PLATE XII



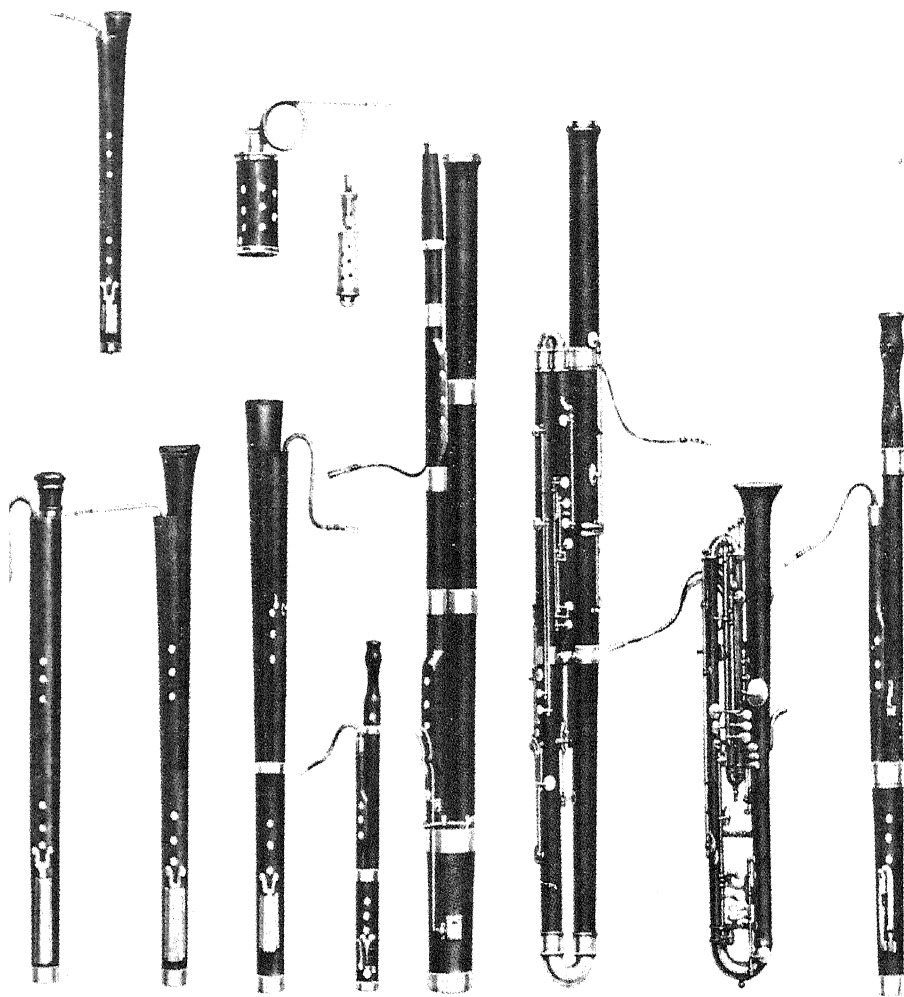
(Front View)

GERMAN SYSTEM BASSOON



(Back View)

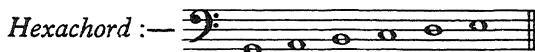
PLATE XIII



EVOLUTION OF THE BASSOON FAMILY



although the usual compass is given as B \flat to B \flat



Overblowing.—This term is explained in the Chapter on the Flute.

The Bassoon overblows in the octave. This does not mean that every note on the Bassoon is fingered (and the note produced) in exactly the same manner as the octave below. For instance :—

Example B is not fingered the same as Example A :—

A

B

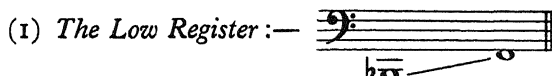


It will be noticed that these notes are all lower than those of the Hexachord. In other words, all the notes in Example A are fingered by means of keys. Now take the following Examples C and D. They may both be fingered in the same manner :—

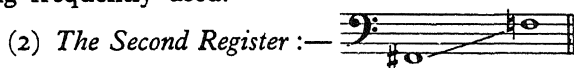


TONAL REGISTERS

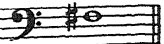
Owing to the imperfect state of the Bassoon there are many different tonal registers, also a large proportion of bad notes.



This is a very effective register of the instrument, the notes “speak” well and are full toned and sonorous, with good carrying power. The key manipulation however is rather awkward, the thumb of the left hand being frequently used.



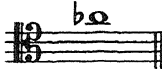
This register is not so full toned and sonorous as the above, but the key manipulation and fingering are, much better.

This note  is bad, being very weak and ineffective.

(3) *Medium Register* :—



That part of the register which forms Example A is fairly good, but that of Example B is rather weak in character and ineffective.

A bad note is 

(4) *High and Extreme Register* :—



This register demands a good standard of technique, the notes requiring to be humoured.

Tonguing.—Single tonguing only is possible on the Bassoon, double and triple tonguing are impossible. The satisfactory speed for single tonguing is as follows :—



Leaps of long intervals such as octaves, etc., when “*staccato*” are simple.



If this example had different articulation, *i.e.*, downward slurs, it would be infinitely more difficult.



Staccato playing on the Bassoon is as flexible as any other musical instrument.



The above passage could be played to appear as if it were written :—



The best keys for the Bassoon are :—C, G, F, D, B \flat , E \flat , A \flat , and their attendant keys.

Further reference will be made to the Bassoon in Part II.

Two examples of Bassoon playing as an Alberti Bass :—

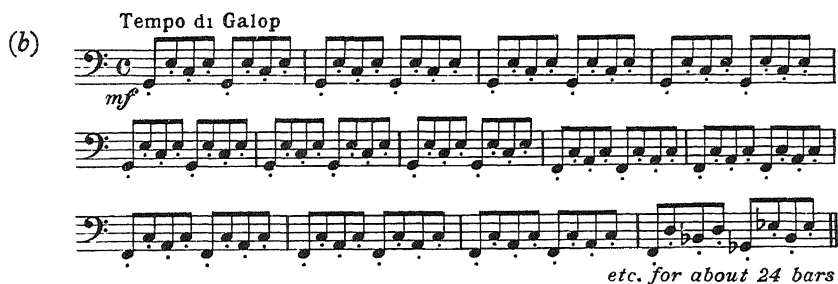
Selection from “Il Trovatore”

Verdi



Overture “Di Ballo”

Arthur Sullivan



Three examples from “Invitation to the Waltz”

Weber

(a) *Legato* playing



(b) Chromatic passage.
fortissimo



“ Dance of the Imps ” from “ Peer Gynt ”

Grieg

Alla marcia marcato



By permission of C. F. Peters.

Scherzo “ L’Apprenti Sorcier ”

Dukas

Quickly, *very staccato*



By permission of Messrs. Durand & Co., Paris.

TREMOLOS FOR BASSOON



* Made easy by the use of the ‘Creation’ Key

TRILLS FOR BASSOON

The musical score for 'The Rose Tree' is presented in five systems, each with a single staff. The notation is in bass clef with a key signature of one flat (B-flat). The melody is written in a simple, folk-like style. Above the staff, the lyrics 'The Rose Tree' are written in a decorative, stylized font. The score includes various musical notations such as notes, rests, and bar lines. The first system starts with a treble clef and a key signature of one flat. The second system has a treble clef and a key signature of one flat. The third system has a treble clef and a key signature of one flat. The fourth system has a treble clef and a key signature of one flat. The fifth system has a treble clef and a key signature of one flat. The score is a single system of music, with the lyrics 'The Rose Tree' written above the staff.

E = Easy. D = Difficult. I = Impossible.

E = Easy. D = Difficult. I = Impossible.

THE HECKEL OR THE GERMAN BASSOON

A description must also be included here of the German System Bassoon.

This is a development of Almenraeder's system, who, together with Jancourt in France, did so much, in the last century, for the improvement of the Bassoon.

Almenraeder's Bassoon possessed a wider bore, in conjunction with an entirely different system of the keys, than the French model, the fingering of which varies considerably to that employed in the ordinary Bassoon.

There are many firms in Germany manufacturing this type of Bassoon, notably Adler, Kohlert, Muhlenhauer, and Heckel. Of these by far the finest maker is Heckel.

His Bassoons being so widely used throughout the world is possibly the reason why the Almenraeder method is generally known as the "Heckel Bassoon".

Instruments of this type have also been manufactured in this country in recent years by Boosey and Hawkes.

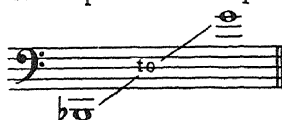
The wider bore of these Bassoons makes the production and control of notes an easy matter in comparison with the French and English Instruments.

The position of the finger plates for the keywork and the number of alternative fingerings, greatly assists the player to perform difficult passages with ease.

This system of Bassoon is much in favour in Europe and America for orchestral work, and in recent years has come to the fore in England, being used in many orchestras.

Wagner was much impressed by the Heckel Bassoon and wrote passages with this instrument in mind, as also the Heckel Contra-Bassoon.

The Contra-Bassoon has a practical compass extending from

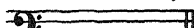


sounding an octave lower than the written note.

N.B. We are indebted to Mr Vernon Elliott for particulars and charts of the Heckel Bassoon and Heckel Contra-Bassoon (Ed.)

It can be used with effect in orchestral works, doubling the Basses, and even extending their compass, on specially constructed instruments to :—



Delius has used it in this way in the introduction to his work "Paris," sustaining a low  for about thirty bars.

gve basso

Beethoven used the Contra-Bassoon with telling effect in the March and Graveyard scene of his opera "Fidelio". Wagner also used this instrument extensively in his later operas.

Dukas, in his *L'Apprenti Sorcier* opens the work with effective writing for the Contra-Bassoon.

Modern composers take advantage of the compass and tone qualities of the Contra-Bassoon, using it most effectively.

TREMOLOS FOR HECKEL BASSOON

TRILLS FOR HECKEL BASSOON

E D D E E E E D D I
 D E E I E E E E E E
 E E E E E E E E E E E
 E E D I D E E E E D D
 E_b E_b E E_b E E_b E_b E_b E_b E_b D_#
 E_b E_b E E_b E E D I I_b * D I_b

* Made easy by the use of the 'Creation' Key

D D D E D I E D D I
 E E E D E I E E E E
 E E E D E E E E E E
 E E E E E E E E E E
 E_b E_b E E_b E_b E_b E_b E_b E_b E_b E
 E_b E_b E E_b E E_b E E_b E_b E_b D

WOODWIND—THE BASSOON

CHART OF FINGERING FOR THE HECKEL BASSOON

This note is
Not on
all
instruments

Left hand fingers

Notes	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
A	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100

Right hand fingers

Notes	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
A	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100

The numbers stand for the corresponding keys
The sign \circ signifies holes to be left open
The sign \bullet signifies holes to be closed
The sign \square signifies thumbhole plate open, \blacksquare thumbhole plate closed
The sign \ominus signifies holes to be half closed
The sign A signifies the A key on instruments which possess it

N.B. The numbers stand for the corresponding keys
The sign \circ signifies holes to be left open
The sign \bullet signifies holes to be closed
The sign \square signifies thumbhole plate open, \blacksquare thumbhole plate closed
The sign \ominus signifies holes to be half closed
The sign A signifies the A key on instruments which possess it

and for certain other use is optional in many cases. It is operated by the left thumb. Certain notes have several sets of fingerings and the student should discover which suits his instrument, bearing in mind the passage to be played

CHART OF FINGERING FOR THE HECKEL CONTRA-BASSOON

These three notes are shown in brackets because they are not on some instruments

Left Hand

1st Finger: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100

2nd Finger: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100

3rd Finger: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100

Right Hand

1st Finger: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100

2nd Finger: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100

3rd Finger: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100

Thumb

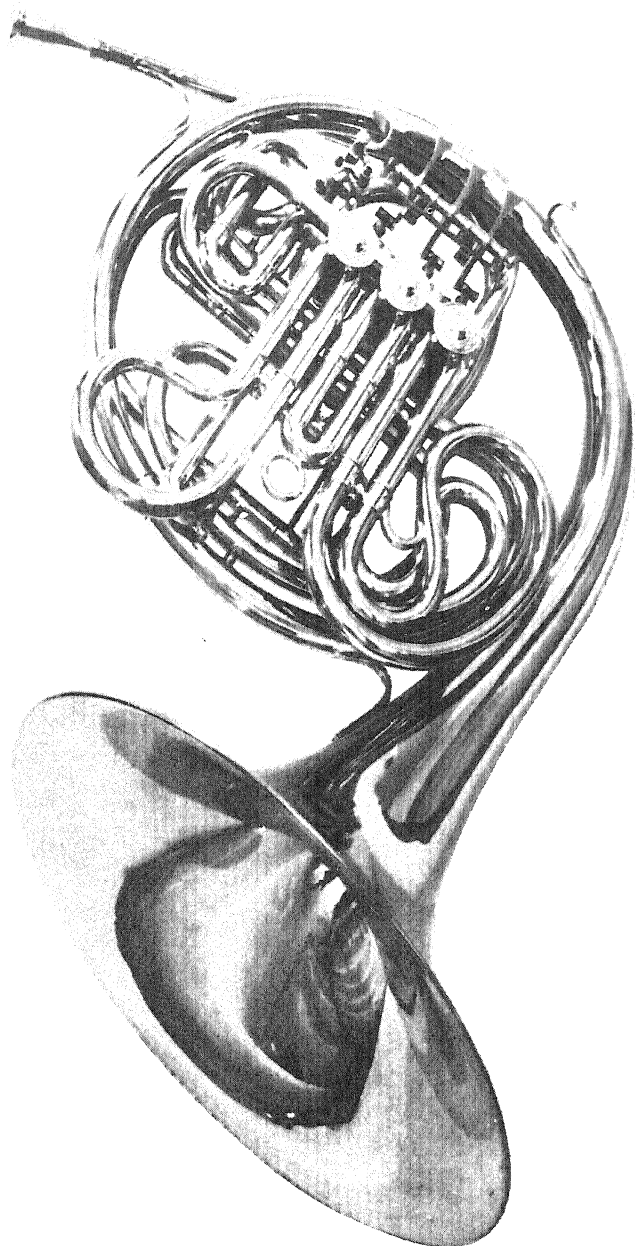
VII: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100

The water collecting in the long metal tube of the Contra-Bassoon must be frequently removed by opening the water key (W)

N.B. The numbers stand for the corresponding keys
The sign O signifies the key to be left open
The sign ▲ signifies the key to be left closed
The sign □ signifies thumbhole plate open, ■ thumbplate closed

The signs O and U signify the two crook keys
The sign A signifies the A key on instruments which possess it
Certain notes have several sets of fingerings and the student should discover which suits his instrument, bearing in mind the passage to be played

PLATE XIV



FRENCH HORN 4 VALVE INSTRUMENT

INSTRUMENTATION

PLATE XV



A AND F FRENCH HORN 3 VALVE INSTRUMENT

GROUP II—BRASS

THE FRENCH HORN

The French Horn is a wind instrument made of brass, and occasionally of beaten silver or other metal. It has a conical bore and is circular in shape. The length of the instrument varies according to its pitch.

From a diameter of about $\frac{1}{4}$ inch the bore expands conically to a diameter of about $1\frac{1}{2}$ feet at the bell.

The instrument is blown by means of a funnel-shaped mouthpiece; this accounts for the individuality of the "Horn Tone." (This is dealt with on page 119.) The diameter of the mouthpiece is about $\frac{3}{4}$ inch.

The instrument is fingered with the left hand, the right hand being placed in the bell.

HISTORY

The history of this instrument is similar to that of the Trumpet and Sackbut (Trombone) for the first period of its existence.

There has been a gradual improvement, rather than any sudden influx of inventive ideas. Paintings and Plates, which are to be seen at the British Museum, go to prove that these instruments in their very crude form were actually in use at the time of Moses.

These three instruments, Trumpet, Horn and Trombone, are referred to from the very earliest times as the "Trumpet," but this does not mean the Trumpet as used to-day.

Illustrations are in existence of instruments used 2,000 years ago. They include :—

Hebrew Trumpets.

Shophar	„	
Turkish	„	
Kegus	„	(Greek).
Chinese	„	
Chalzozera	„	
Keren	„	
Nursingh	„	(Indian).
Buccina	„	(Roman).
Lucinius	„	(Roman).

These old instruments, Trumpets, Sackbut, Horn, Viol, Lute, Ravanastron, etc., are the ancestors of the modern instruments as used to-day.

They were made of tortoiseshell, thigh bones of animals, bark of trees, horns of animals, ivory tusks, etc. These instruments were highly coloured, decorated and carved. Sometimes they were covered with leather or cloth decorated in the most flowery style. In shape they were either straight (as in the case of the present day Post Horn or Coach Horn) or curved similar to animal horns.

In the German translation of the Bible by Luther he interprets the "Keren" as the "Trompete" and the "Khatsotsrat" as the Trombone (the latter in this case being merely a tube, probably a little longer than the Trumpet).

The antiquity of these instruments can be gauged from the fact that in the History of the Jews, by Josephus, mention is made of David who commanded that 200,000 Silver Trumpets should be ordered for the use of the Israelites, these instruments to be made after the style invented by Moses. The Army of the Israelites, used these Horns and Trumpets for their military ceremonies and displays.

Later the Horn was used as a signal for war, each Commander having his "Horn Blaster." In mediaeval times the reward for valour was a Horn or Bugle.

From the foregoing can be seen the number of uses to which these ancient instruments have been put. As time went on, however, these instruments from being all of the same family character, became separated into individual instruments with their own peculiar characteristics, developing into Horn, Trumpets and Trombones, etc.

The Horn known as the Hunting Horn is a natural Horn, being of the same family as the Post Horn and Coach Horn, certain of these instruments being circled round the body.

A chronological table of the various phases in the history of the Horn is as follows :—

- B.C. . . The Trumpet and Horn said to have been used in the Army of the Israelites.
- B.C. . . David is said to have desired that every Israelite should possess a Trumpet.
- 365 B.C. . . Alexander the Great used a Horn of enormous size to summon his Army for war.
- 650 A.D. . . Roland (the hero of "Chanson de Roland") is said to have burst the veins of his neck when he was blowing his famous Horn too boisterously.
- 1560 A.D. . . Horns were first given a definite pitch and crooks were used.
- 1712 A.D. . . Horns were first used in Opera in Vienna.
- 1715 A.D. . . The first occasion of the employment of Horns in the orchestra at Dresden.
- 1720 A.D. . . First used in England at the Haymarket Theatre in Handel's "Radamisto."

- 1750 A.D. . . Hempl of Dresden lowered the pitch of the Horn a semi-tone by inserting a pad of wool in the bell. He also introduced the tuning slide.
- 1751 A.D. . . Bands composed entirely of Horns were fashionable amongst the nobles of Prussia. The Horns ranged from 1 foot to 8 feet in length.
- 1755 A.D. . . Horn Bands were introduced into the Concert Halls of Russia.
- 1759 A.D. . . Rameau introduced Hunting Horns into an opera.
- 1760 A.D. . . Kolbel furnished the Horn with keys; this, however, failed.
- 1814 A.D. . . Stolzel introduced air-tight valves.
- 1817 A.D. . . Horn Bands used for effective open-air Church Services in Germany.
- 1819 A.D. . . Muller invented the three-valve Horn.
- 1833 A.D. . . Horn Bands were first introduced into England and consisted of about 20 Horns and one Clarinet.
- 1835 A.D. . . Halsvey introduced the Valve Horn into the orchestra.
- 1892 A.D. . . Horns made of copper were introduced in Vienna.

Since the period of Mozart, the Horn has been employed with admirable effect. All the great composers have since been equally versatile in their treatment, Weber being particularly keen and appreciative of the beauty and possibility of the instrument, his writing for the instrument being always vocal in style.

TONAL QUALITIES, PITCH AND HARMONICS, ETC.

"Horn Tone" is conspicuous amongst all other brass instruments. The nearest approach to the individuality of tone produced is that of the Trombone. The Trombonist must, of course, be musical and sufficiently intelligent to realize that it is not a Trombone tone he must produce in this case, but as near to the Horn tone as possible. This is obtained by playing softly. The author, when desiring the effect of a Horn quartette in a band of 25 performers, uses two Horns and two Trombones, and the effect is strikingly satisfactory.

The tone of the instrument is more poetic and romantic than any other musical instrument; it also bears a very close resemblance to the human voice.

The Horn is equally eloquent in either quiet or subdued playing or in the declamatory piercing and penetrating blasting and "hard stopping."

The mellowness of its tone allows for its being "doubled" and blended with almost any other conceivable tone colour, and it is the recognized link between the brass and reed of the Military Band.

Before dealing with the various tonal registers of the Horn it has been considered advisable to deal with the old natural Horn.

TONAL QUALITIES, ETC., OF THE NATURAL HORN

Fr., Cor Simple.

Ger., Waldhorn.

It., Corno.

The Natural Horn is now practically obsolete, but from the historical point of view it has been considered worthy of mention.

The first harmonics are never written for, and very difficult to produce on the larger crooks, but the whole of the remaining harmonics are practicable. By a change of crook the pitch of the instrument can be altered to produce any note of the chromatic scale.

Crooks.—These are circular conical tubes of various length for transposing the Horn into any desired key. The crook is interposed between the body of the instrument and the mouthpiece. The longer the crook the lower the pitch.

STOPPING

Stopping originated in the days of the natural Horn, and was used to enable the performer to produce other notes than the natural Harmonics of the crook in use.

After the introduction of valves this device was no longer necessary, but “stopping” is still of great importance, on account of the contrast of tone colour that can be produced by closing the bell with the hand.

Half-stopping.

When the bell of the Horn is half-closed or half-stopped, thus cutting off half the air column, the pitch of the instrument is lowered a semitone and the tone is decidedly muffled. This is used when a real echo or *con sordini* effect is required.

Full-stopping.

When the bell of the Horn is fully “stopped” or fully closed, the length of the instrument is shortened, thus raising the pitch of the instrument a semitone which gives a distinctive “brassy” tone colour unlike any other voice in the Military Band. This device is greatly used by modern composers, and practically started with Wagner.

The performer can produce with good result any “stopped” note as low as the 4th Harmonic



with his hand. If, however,

lower notes than the above are required to be "stopped," the performer will have to resort to the use of a mute, which greatly facilitates the production of these low "stopped" notes.

Unlike the hand, which raises or lowers the pitch of the instrument, the mute does not in any way affect the pitch, because the air column is free to pass through the mute.

It must be remembered that the performer needs time to insert his mute, and that he cannot "stop" a single note in the middle of a phrase with his mute, with the same facility as he could with his hand.

In the following passage the 1st and 3rd Horn players would use their hands, but with the 2nd and 4th Horns mutes would most certainly be used.

"Götterdämmerung" Wagner

in E

1st Horn

2nd Horn

3rd Horn

4th Horn

Also it will be plainly understood that the only way to "stop" the note indicated in the following passage, is with the hand.

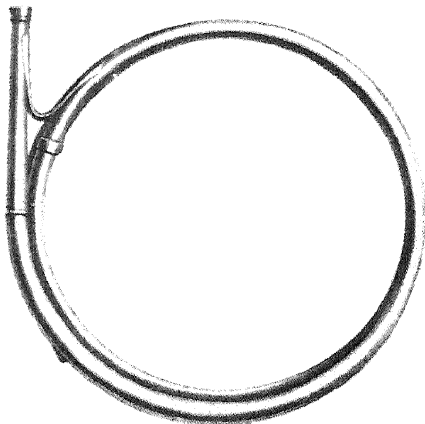
in F

Various Terms for Stopped Horn—

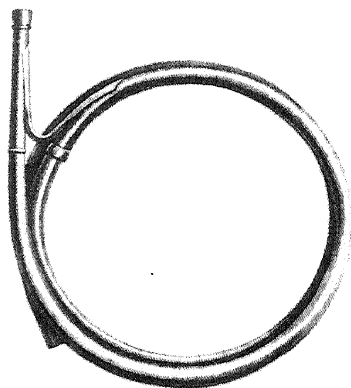
<i>Gedämpft</i>	} German	<i>Con Sordini.</i> —Italian
<i>Gestopft</i>		<i>Avec Sourdines.</i> —French
<i>Mit Dämpfer</i>		<i>Echo</i>
		<i>Stopped</i> } English

If a single note is required to be stopped it is usual to put the sign +.

PLATE XVI



E♭ Crook

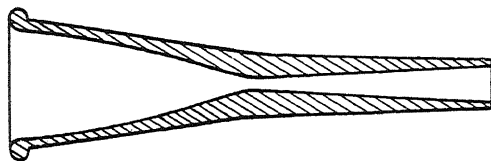


F Crook

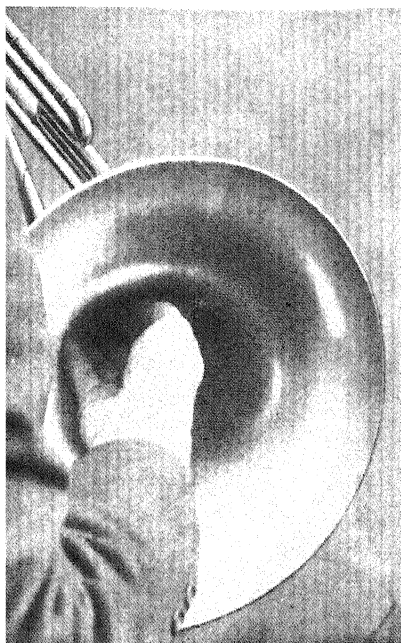


FRENCH HORN

PLATE XVII



MOUTHPIECE OF HORN
(Shown in section)



“ OPEN ” HORN

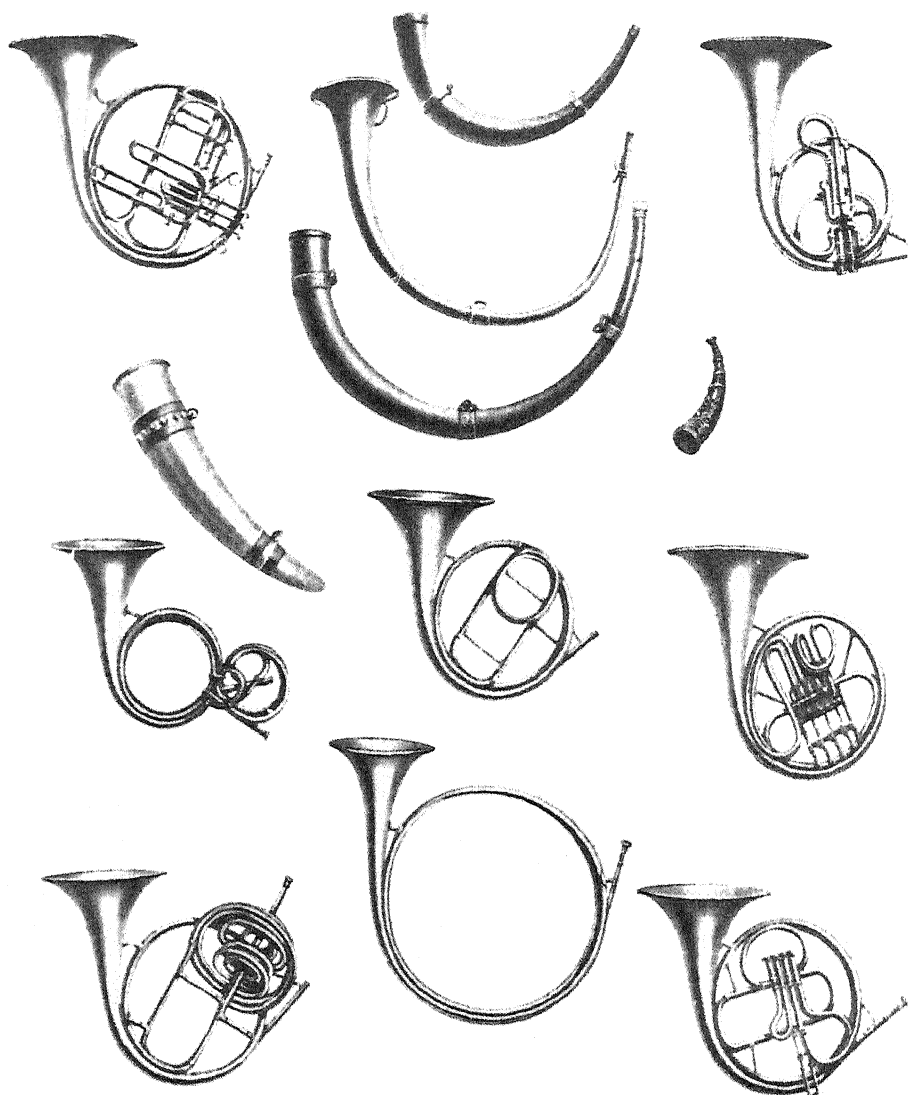
Showing open position of hand in the Bell
when ordinary tone is required.



“ STOPPED ” HORN



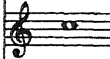
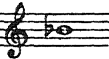
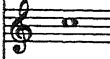
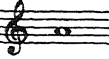
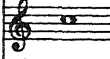
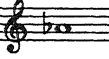
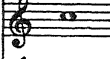
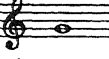

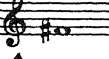
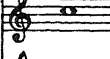
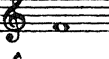
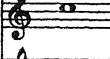

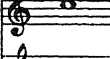
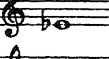
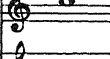
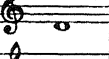
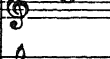
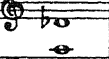
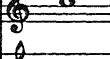
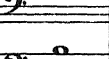
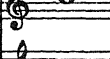
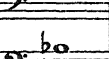
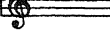
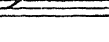
Showing closed position of the hand in the
Bell when “ stopped ” notes are required.

PLATE XVIII



VARIOUS TYPES OF HORNS

THE ADKINS HORN CHART

Description of Horn.	Length of Horn (with Crook)	Length of Crook.	Plays.	Sounds.
Horn in C Alt. Concert Pitch.	8 ft. 5 in.	1 ft. 0 in.		
Horn in B \flat Alt. Sounding a Major 2nd lower	8 ft. 11 in.	1 ft. 6 in.		
Horn in A. „ Minor 3rd „	9 ft. 6 in.	2 ft. 1 in.		
Horn in A \flat . „ Major 3rd „	10 ft. 1 in.	2 ft. 8 in.		
Horn in G. „ Perfect 4th „	10 ft. 9 in.	3 ft. 4 in.		
Horn in F \sharp (or G \flat). „ Aug. 4th „	11 ft. 5 in.	4 ft. 0 in.		
Horn in F. „ Perfect 5th „	12 ft. 2 in.	4 ft. 9 in.		
Horn in E. „ Minor 6th „	13 ft. 0 in.	5 ft. 7 in.		
Horn in E \flat . „ Major 6th „	13 ft. 8 in.	6 ft. 3 in.		
Horn in D. „ Minor 7th „	14 ft. 7 in.	7 ft. 2 in.		
Horn in D \flat . „ Major 7th „	15 ft. 5 in.	8 ft. 0 in.		
Horn in C Basso. „ Octave „	16 ft. 3 in.	8 ft. 10 in.		
Horn in B Basso. „ Minor 9th „	17 ft. 2 in.	9 ft. 9 in.		
Horn in B \flat Basso. „ Major 9th „	18 ft. 3 in.	10 ft. 10 in.		

The author does not claim that the above measurements are exact to a fraction of an inch, as he is well aware that different makes vary. The object of the chart is to enable one to visualize the size of each Horn and Crook, and to see at a glance the relative pitch of each member of the family

	Gen	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Open Tube																							
2nd Valve																							
1st Valve																							
1st & 2nd or 3rd Valves																							
2nd & 3rd Valves																							
1st & 3rd Valves																							
1st, 2nd & 3rd Valves																							

THE VALVE HORN

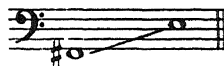
Although Horns are built or crooked in various keys the Horn in F is the most regularly used in the Military Band.

The compass of the valve Horn is :—



TONAL REGISTERS

The Low Register.—

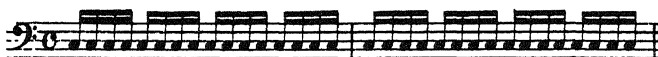


This register is usually avoided in writing music for Military Bands, it being too low to be effective. Its special “forte” is :—Pedals and long sustained notes. Rapid passages, leaps and *arpeggi* should be avoided.

The following example of tonguing is possible in this register :—

Speed of Tonguing.

Moderato



The Second Register.—



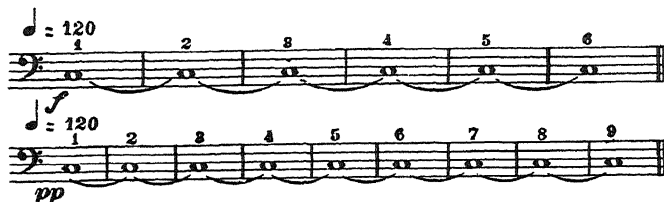
This register is mellow and sweet. It is the commencement of the real Horn tone. The examples given at the end of this chapter will illustrate the use of this register in the Military Band, and would be employed more by the 2nd Horn player than the 1st.

Pedals, long notes and bass to hunting and martial calls are its special “forte.”

Single tonguing in semiquavers up to a speed of about $\text{♩} = 120$ is satisfactory :—

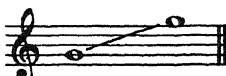


Duration of Breath.—It has been found that performers can hold out for a longer period of time on the lower notes of the Horn than on the higher. This is accounted for by the extra pressure required for the higher notes and consequent strain on the lungs :—



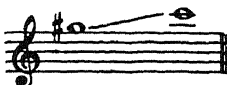
Hence the effective pedals which the Horn can master so admirably.

Double and Triple Tonguing is very unsatisfactory and should never be attempted.

Third Register.— 

This is the register employed to great advantage in some passages by the 1st Horn, and can be used with more freedom. *Arpeggios* can be played with ease in this register.

The tone is beautiful, mellow and poetic, and is capable of a bold characteristic *timbre*

The High Register.— 

This register should not be written for too freely as the high notes are difficult to obtain, requiring exceptional wind pressure. In fact, it is dangerous and insecure to write above the G.

Wagner uses this high register in the Opera "Siegfried," but it works up in tones and is *ff tutti*. The following example illustrates the employment of this register in the above-mentioned opera :—

Orchestra. 

The above is an exceptional piece of Horn writing and is not quoted for imitation.

USES IN THE MILITARY BAND

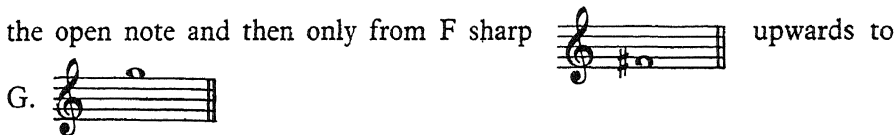
The Horn can be suitably described as the mortar of the Military Band. The latter consists of three distinct sections : Brass, Reed (with Woodwind), and Percussion. The first two sections must naturally be

joined together as a whole, to make a well-balanced combination. The Horns act as the bridge ; should the Horns be resting, or tacet (which is very seldom) their absence is instantly noticed, as the band then lacks fullness and solidity.

The Horns play in combination with the reed equally as well as they do with the brass.

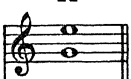
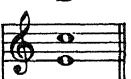
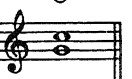
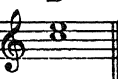




Both 1st and 2nd Horns are used as solo instruments as well as for accompanying. Solos of a smooth *legato* nature are excellent. Hunting calls, etc., are naturally suitable. Sustaining the harmonies and nursing the middle of the band, also modulatory chords are the principal functions of the Horn. Acting as bass to the higher reed and woodwind is another of the useful features of the instrument. In solos for the instrument the accompaniment should be carefully arranged. For giving prominence to any special note of the chord and for emphasizing particular intervals it is very effective.

Trills.—Lip Trills are mainly used on this instrument. The valves are seldom employed. The air cannot travel speedily enough through the tube, which is very narrow in comparison to its length. Trills should be sparingly written, as only experienced performers can produce a good trill. Valve Trills considered possible are those which are a semitone below the open note and then only from F sharp



Lip Trills which embody the 8th, 9th and 10th Harmonics are the most practicable.

When writing a full chord for four Horns it is considered advisable to interlap the notes of the chord as follows :—

	A	B	C	D
1st Horn				
2nd Horn				
3rd Horn				
4th Horn				

(A) and (B)—Rather than examples (C) and (D).

Horns are always employed in pairs, no matter how many are in the band.

Further reference to the Horn will be given in Part II. Arranging.

Typical Horn Solos from Military Band arrangements :—

Overture "Oberon" Weber

Adagio

"Three Bavarian Dances" Elgar

Moderato

By permission of Joseph Williams, Ltd.

Overture "The Land of the Mountain and Flood" H. MacCunn

Allegro con moto

Extracts from the Overture "Semiramide" Rossini

Andantino

(A)

Andantino

(B)

Allegro

(C)

Allegro

(D)

Overture "Martha" Flotow

Larghetto

THE DOUBLE HORN AND THE COMPENSATING HORN

The Double Horn was invented on the Continent, and has been used by European Countries, particularly Germany and Italy, for many years, but only achieved popularity in this country in 1910.

It was introduced here for three main reasons: Firstly—its double set of tubing gives greater agility of execution of difficult passages, particularly in modern works. Secondly, by making use of the B \flat Horn fingering the close harmonics above the 8th on the F Horn, which require such careful lip work, are "neutralised", which means that accurate pitching of notes is made so much more certain. Thirdly, the bore of the Double Horn is somewhat larger than the normal French Horn, with the result that the Double Horn is so much more free blowing, and a bigger, broader tone is produced.

This latter point has been the subject of much discussion among the older generation of players, who maintain that the larger open tone of the large bore Horn is not the real French Horn sound. Nevertheless, the large bore instrument can be played very artistically, and is now almost exclusively used. The size of the mouthpiece, of course has some bearing on the sound—by using a "French Horn" mouthpiece—which is smaller than a "Double Horn" mouthpiece a sound approximating that of genuine French Horn can be obtained.

The Double Horn is, in fact, two instruments in one. Hence its name, and it is invariably fitted with 4 Rotary action valves.

It comprises an F Horn, and a B \flat Horn pitched a perfect fourth higher, with 2 sets of valve tubing, lying close together side by side, the longer set for the lower instrument (F) and the shorter for the higher (B \flat).

When played normally in F, it is exactly the same as any other French Horn. The 4th valve is not depressed, and is used more or less, as a thumb rest.

Under these conditions, the whole of the approximate 12 feet of main tubing is in use, plus any extra lengths brought into play as and when the valves are manipulated, incorporating of course, in this case, the longer set of slides. The B \flat tubes, during this time, are not in use, and it would make no difference whatsoever, if they were entirely omitted from the instrument.

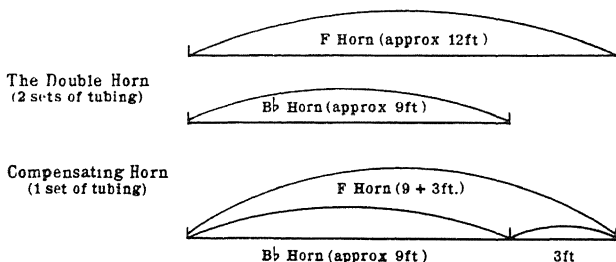
When the 4th or Thumb valve is depressed, the pitch of the Horn is immediately altered to B \flat . Two things happen here, First, the lowered valve automatically cuts out about 3 feet of the main tubing, reducing it to about 9 feet in length, at the same time switching the air column into the shorter or B \flat slides when the remaining 3 valves are used.

This raising of the pitch of the instrument greatly facilitates the playing of the higher notes on the Horn, though of course a player uses exactly the same lip tension for a note of a given pitch regardless of fingering. It used to be that the 1st and 3rd horns of the orchestra, who usually play the upper notes used the B \flat Horn, and the 2nd and 4th, who use the lower registers, played on the F. This practice is now gradually dying out, and the instrument is being used as a 4 valved Horn by all players, over the whole range of the instrument.

A variation on the Double Horn is what is referred to as the 4 valved Compensating Horn. This instrument has not the double set of tubing as the F and B \flat , but fulfils the same purpose. The main difference between the two instruments is that

instead of having practically half the Horn out of use, when playing in different pitches, as on the Double Horn, the Compensating model is constructed with the B \flat valve tubing only, with extra lengths of tubing placed on the valve casing, which constitutes the *difference in length* between the B \flat and F slides. These extra lengths are in use when playing as an F Horn, but are cut out, again with about 3 feet of main tubing, when the 4th valve or piston is lowered, thereby, as with the Double Horn, shortening the overall length of the instrument. and raising the pitch a perfect fourth.

A simple illustration might make this clearer.



A big advantage of the Compensating instrument is that, as there is not so much tubing involved, the overall weight of the Horn is considerably reduced. A further stage is reached by some Double Horns being built with 5 valves. This additional valve is either placed alongside the existing B \flat Thumb valve, or is operated by the little finger of the left hand. This is known as a semitone valve, and lowers the pitch of the Horn one half tone. This is most useful in a number of ways. Firstly it can be lowered when any hand "stopping" is required. It will be remembered that fully "Stopping" the F Horn raises the pitch one semitone and the B \flat Horn $\frac{3}{4}$ tone. To counteract this, and to maintain the pitch of the note required to be sounded, the player has to transpose a semitone lower. On the F this rectification can be done very easily and readily, by merely lowering the 5th valve and adjusting the slide $\frac{1}{2}$ tone for the F and $\frac{3}{4}$ tone for the B \flat .

Further advantages are that when playing in F, the semitone valve will give a Horn in E, and when playing in B \flat the valve will put the instrument into A. Hence the different pitches, i.e., —F, E, B \flat and A.

When transposition does become necessary, it will be seen that the F and B \flat will accommodate the flat keys, and the E and A the sharp keys.

The present day tendency, however, is to play entirely on the B \flat Horn, although this has limitations, when it comes to producing some of the extreme low notes. In order to facilitate this, Messrs. Boosey & Hawkes Ltd., are now fitting to all their Double Horns a reversible Thumb lever. This means that instead of the usual F Horn, with a 4th valve change to B \flat , the instruments can be pitched firstly in B \flat with a 4th valve change to F, if required.

This is a revolutionary change in the layout of the Horn, and does away with the fatigue of permanently holding the Thumb lever down to play in B \flat pitch.

All this does not mean that it is difficult for anyone who has been playing a piston Horn to change over to a Rotary Double Horn. As far as the F Horn is concerned the fingering and approach is exactly the same, except that 1, 2, and 3, levers are used in place of 1, 2, and 3, valves.

The B \flat Horn might require a little extra study, for those used to playing the F Horn only, but should not present any great difficulty to the average player.

Harmonic Series for Double Horn when in B^b

	Gen	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Thumb or 4th Valve																	
2nd and 4th Valve																	
1st and 4th Valve																	
1st 2nd and 4th Valve or 3rd and 4th Valve																	
2nd 3rd and 4th Valve																	
1st 3rd and 4th Valve																	
1st 2nd 3rd and 4th Valve																	

Fingering of Chromatic Scale for F and B^b Double Horn

It will be realised that on the harmonic series derived from the above two fingering systems, the valve combination for any given note is almost endless.

e.g.  can be fingered at least 8 different ways. Open, 1, 2, 3, 4, 5, 6, 7, 8.

It is up to the player to work out the simplest and most effective, according to the context of the passage to be played.

HARMONIC FINGERING

esto ($d = 120$)

Harmonic Fingering

Scallo

Allegro

Scallo Flanger

Harmonic Fingering

THE CORNET

Ital., Cornetto.*Ger.*, Kornett.*Fr.*, Cornet à piston.

This is a conical tube of brass, silver or other metal of about 54 inches in length. It is blown by means of a cup-shaped mouthpiece.

The bore is larger than that of the Trumpet and developed on the same principles as that of its ancestor—the Post Horn.

The diameter of the bore at the mouthpiece entrance is about $\frac{3}{8}$ inch, and gradually expands conically until it reaches a diameter of about 6 inches at the bell.

The instrument is held firmly by the left hand, thus leaving the right hand free for valve action.

A music for the Cornet is written in the treble clef.

HISTORY

The Cornet as we know it at present is comparatively modern, and possesses no ancient history like that of the Horn, Trumpet and Trombone. It is evident, however, that these instruments undoubtedly had their influence on the origin of the Cornet during the reign of Edward IV. He had one Cornet player in his private band of 13 "mynstrells." This instrument, however, was merely a coarse reed pipe, producing the reverse of a pleasant tone. As a matter of fact it has no relationship whatever to the present-day Cornet. In appearance it was similar to a Clarinet without keys and made of wood.

The Cornet was originally called the Cornopean and it forms the connecting link between the Trumpet and Horn. When first invented it had various crooks and shanks, which served to alter the instrument to the pitch required. It now has two shanks, the B \flat and the A natural (the two pitches desired on the modern instrument).

The invention of the valves has been wrongly attributed to a German named Stolzel, but it really was that of an oboe player named Blumel. Valves when first used were rather awkward squares of brass, but they were eventually brought into line with those of the keyed Bugle, which was then the solo instrument of the brass section of the Military Band. They were partly perfected by Charles Sax.

The compass of the Cornet at this stage was



this instrument having only two valves; the third valve being added a few years later. The compass was then extended to the low F sharp.

The instrument as we know it to-day dates from the year 1839. Cornets have been made at various times with no valves, ranging to the instrument with six valves; these, however, proved to be very unsatisfactory.

In 1824, Shaw of Derbyshire experimented with valves having springs attached to the side. A few years later a German named Shott improved upon the invention of Shaw, and found a certain degree of success in Austria and Germany.

In 1842, Sax (*see* page 86) perfected the Cornet to an amazing degree.

The modern instrument is a fine example of workmanship with hardly any bad notes, and on which very few trills and tremolos are impossible.

THE FUNCTION AND EMPLOYMENT OF THE VALVES

The employment of the valves is to vary the length of the wind column by shortening or adding certain lengths of tubing to allow for the production of a complete chromatic scale throughout the compass of the instrument. There are seven separate lengths of wind column available, corresponding to the seven positions on the slide Trombone. (A glance at the harmonic series on page 136 will illustrate this.)

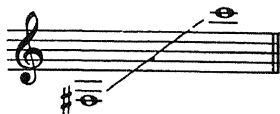
THE PRODUCTION OF SOUND

The sound is produced by the breath passing between the player's lips which form an air column by their vibratory motion. The increased or released tension of the lips causes variation in the speed of the vibrations. This accounts for the height or depth of pitch.

The Mouthpiece.—This mouthpiece (cup-shaped), combined with the dimensions of the bore, is responsible for the "Cornet Tone." The more coned-shaped the mouthpiece is, the sounder the tone of the instrument; this also affects the Baritone, Euphonium or Bass.

TONAL QUALITIES, REGISTERS, ETC.

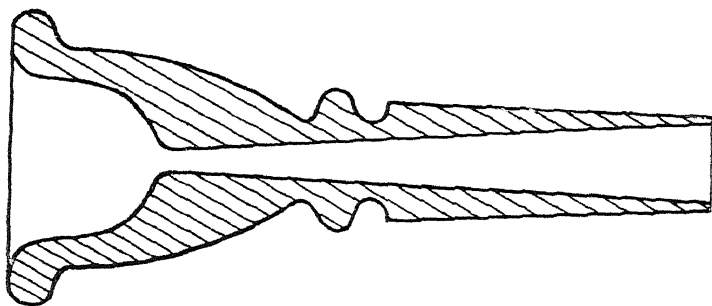
The Cornet has a chromatic compass of 31 notes. The actual sounds being a tone lower. Some performers are capable of extending the compass several notes higher than top C.



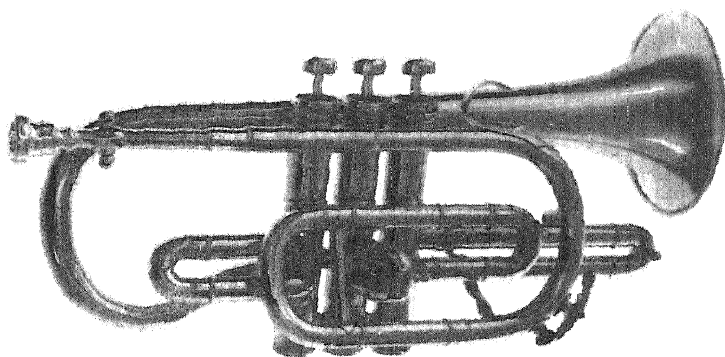
On account of its flexibility, ease of tone production and general utility the Cornet superseded the Trumpet. The Cornet does not compare with the Trumpet for pure brilliance of tone, but when played with any degree of artistic control it can more than hold its own in purely Military Band work.

Other than on this single point of brilliance of tone the Cornet is the more suitable. The ease and gracefulness with which it can be used in the performance of solos and passages of a florid nature, is very creditable. Solos of the ballad and operatic aria type are strikingly effective and realistic.

PLATE XIX



MOUTHPIECE OF CORNET
(Shown in Section.
on enlarged scale.)

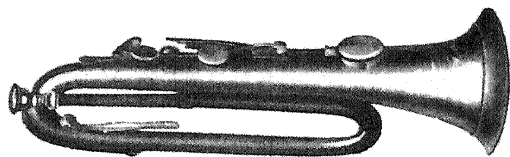


B \flat CORNET

PLATE XX



EVOLUTION OF THE MODERN BUGLE



KEY BUGLE. About 1810.

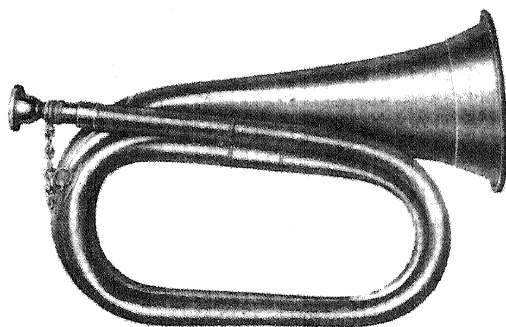
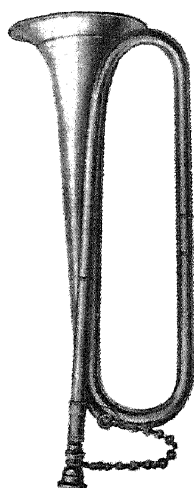
B \flat REGULATION BUGLE

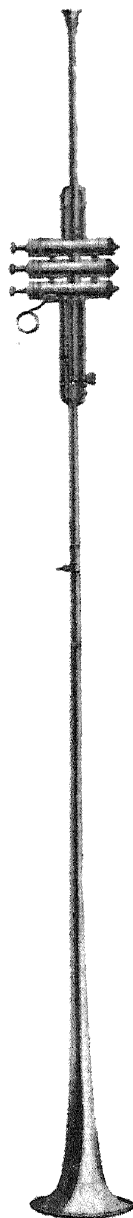
PLATE XXI



HERALD'S TRUMPET



REGULATION OR CAVALRY TRUMPET IN E \flat



AÏDA OR BACH TRUMPET

Tonguing.—Single, double and triple tonguing is one of the principal assets of the Cornet. The following examples will illustrate the ease and comfort of this branch of Cornet technique :—



Chromatic passages, both tongued and slurred, can be performed on this instrument with almost the same degree of fluency as on the Clarinet.

The following chromatic runs could be played with the greatest ease and effect, the intonation and rhythm being perfect.

The following is quite comfortable in one breath :—

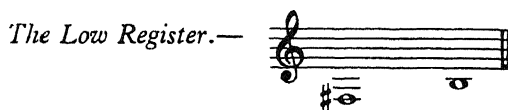
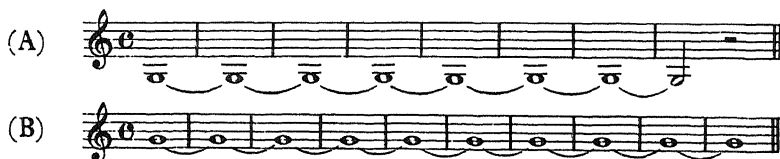


Double tonguing very easy at ♩ = 160, single tonguing at 130.

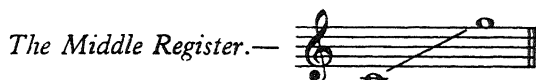


Duration of Breath.—The bore of the instrument and the short length of tubing assist the sustaining power of the performer. The following examples illustrate the possibilities of the average performer.

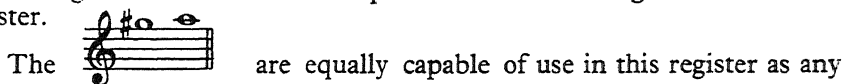
(A) ♩ = 120 for about 7 or 8 bars. (B) ♩ = 120 for about 9 or 10 bars.



In this register the tone is inclined to be thick and heavy, but is capable of producing sonorous and full-toned notes. In solo work it is not used too frequently, the low B \flat being used occasionally. The embouchure being more open in this register than for the remainder of the compass the intonation of these notes leaves something to be desired, but a more correct intonation depends upon the ear and lip of the player.

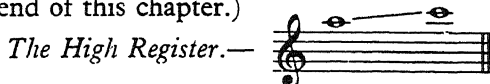


Although C \flat to G is given, it must not be taken too literally, being more for guidance than from the point of view of fixing a distinct tonal register.



other of the given notes.

It is a beautiful register for solos, being capable of brilliance in execution and performance, the notes having fine volume of tone and carrying power. (Solos illustrating the use of this register are given at the end of this chapter.)



The notes are rather difficult to produce and must be used with caution. A study of Cornet writing is advised. The notes are really brilliant and extremely effective. They are more suitable for open-air performance than for indoor. When used it should be for short periods, and certainly not for any length of time.

This register is generally employed in *ff tutti* and in *cadenzas* of a florid nature, as follows :—



USES IN THE MILITARY BAND

In the official band of 25 performers three B \flat Cornets are employed ; sometimes four. Most musicians are familiar with the function of the Cornet in the Military Band, and it is also probably one of the instruments most widely known to the man in the street.

One of the most common forms of solo is that of the ballad and, when played well, is one which is very effective. The older type of solo, that of the double and triple tongued polka and rapid execution display, formerly so very popular with the public, is hardly ever heard now, the more *cantabile* style of solo being in favour nowadays.

When muted and playing *pp* the Cornet is an excellent substitute for the Oboe. It is very effective for supporting the Clarinets in passages of heavy execution, and is equally efficient in trumpeting passages and fanfares. For marching purposes it is invaluable.

The favourite keys for Military Band playing are the major keys of C, F, B \flat , E \flat , G and D, with their relative minors. With the modern perfection of the instrument very little is impossible, but slurring on the high notes demands a good technique. Trills are much better left to the woodwind unless for special effect or solo work. The instrument is very effective in *pp crescendo* to *ff*.

Slides.—The Cornet has four tuning slides, the longest of which (known as the main slide) acts upon the body of the instrument. The other three are called valve slides, and are used for the purpose of tuning the 1st, 2nd, and 3rd valves.

In addition to the B \flat Cornet as used in the Military Band, there is an E \flat Soprano Cornet which occupies the same position to the B \flat Cornet as the E \flat Clarinet does to the B \flat Clarinet. It is smaller in size than the B \flat Cornet, but is exactly the same in all details of mechanism, harmonics, etc. The tone is more shrill and piercing. It is pitched a perfect fourth higher than the B \flat Cornet, and is used, with few exceptions, solely in the Brass Band.

The Cornet, in C is used more on the Continent than in Britain. Its tone is brilliant, resembling that of the Trumpet, and being a non-transposing instrument, it is very useful.

TABLE OF HARMONIC SERIES FOR CORNET

	1 Gen	2	3	4	5	6	All flat 7 (b)	8	9	10	All sharp 11
Open Tube.											
2nd Valve.											
1st Valve.											
1st & 2nd or 3rd Valves.											
2nd & 3rd Valves.											
1st & 3rd Valves.											
1st, 2nd & 3rd Valves.											

CHART OF TRILLS ON B \flat CORNET

E = Easy. D = Difficult. I = Impossible Trills.

The following examples show the various styles of Cornet Solos—

(a) An example of *legato* playing—

“Serenade”

Schubert

Andante con espressione



(b) Solo of the Polka type—

“The Friendly Rivals”

Charles Godfrey

Tempo di Polka



By permission of Messrs. Chappell & Co., Ltd.

“Reminiscences of Scotland”

Fred Godfrey

Allegro



By permission of Messrs. Chappell & Co., Ltd.

(c) The Ballad style—

Song, "I hear you calling me" Charles Marshall



Song, "When other lips"

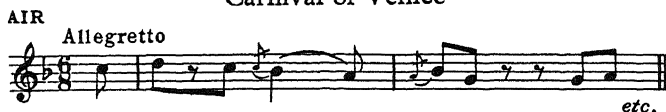
Balfe



(d) The old Air and Variation type—

"Carnival of Venice"

Arban



1st VARIATION



2nd VARIATION



3rd VARIATION



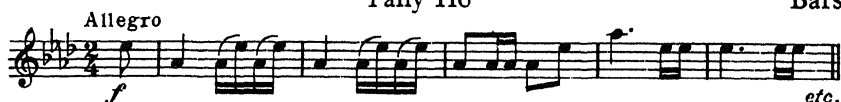
4th VARIATION



The following is a typical example of a Post Horn Solo—

"Tally Ho"

Barsotti



THE TRUMPET

It., Tromba.*Ger.*, Trompete.*Fr.*, Trompette.

The Trumpet (and its relationship to the Cornet for use in the Military Band).

Before proceeding to deal with the various technicalities, etc., of the Trumpet, it has been considered advisable to deal with the merits and demerits of its use in the Military Band in relation to the Cornet.

There has been, and probably always will be, discussion as to why the Cornet is employed as the soprano voice of the brass instruments of the Military Band (and Brass Band) in preference to the Trumpet.

The Cornet is a Cornet and the Trumpet remains a Trumpet. If this point were remembered there would be less argument.

The Cornet has won its way universally as the foremost brass instrument of the combination just mentioned, because its tonal qualities are more suitable for blending with the Military Band combination than that of the Trumpet. The latter could never, with its brilliant and somewhat hard tone, compare with the former in the playing of the ballad or *cantabile* style of solo work required, because it was never built for the purpose.

The common-sense view is that the Trumpet is essentially an orchestral instrument, and the Cornet is essentially a military band instrument. Each has its good points.

Nobody would ever dream of comparing a racehorse, which is bred solely for racing, with a Suffolk punch horse, which is bred solely for draught purposes and heavy haulage work generally.

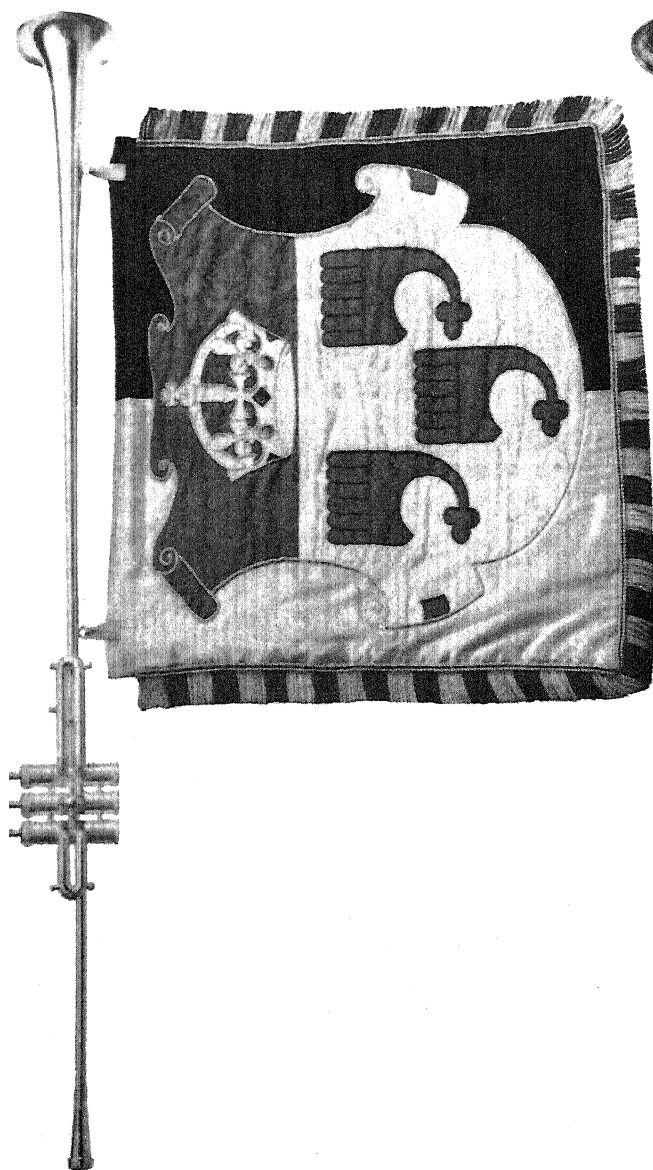
The Cornet has earned much undeserved odium through the rank bad playing one hears frequently at street corners and in inferior bands all over the country; when played well it is really a beautiful instrument.

HISTORY OF THE TRUMPET

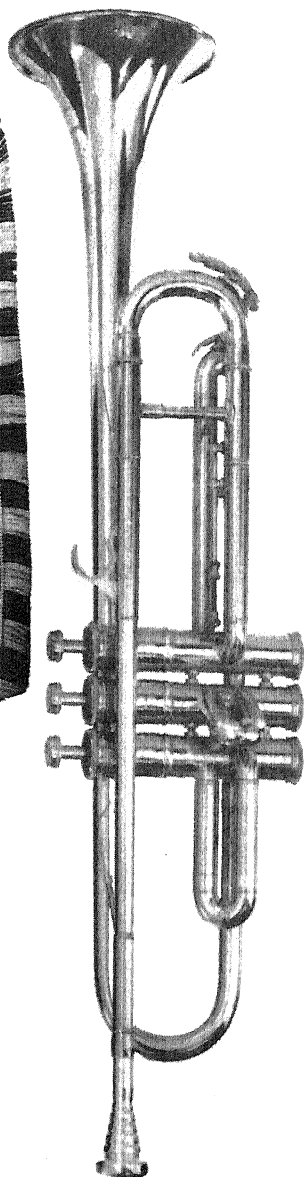
The history of the Trumpet corresponds with that of the Horn until late in the fifteenth century, when various lesser known composers attempted to single out its individuality. The first landmark as a solo instrument occurred in the opera "Orfeo," by Monteverde. He used five Trumpets, but it was really a failure. From then onwards it gradually assumed a position of comparative importance. During the seventeenth century the C and D crooks were generally employed. In the eighteenth century various other crooks were added.

Various well-known trumpeting passages are familiar. Military band examples will be given at the end of this chapter.

PLATE XXII



NEW ROYAL FANFARE TRUMPET












TRUMPET (Emperor)

The only Trumpet used in Military Bands at the present time is the one pitched in B \flat . It is really a hybrid, in other words, a Cornet built of thinner tubing on the lines of a Trumpet. It has the same compass and series of harmonics. It is not to be confused with the older Trumpet or the natural Trumpet.

The older family of Trumpets was crooked for various keys and pitches on exactly the same lines as the French Horns, ranging from G \sharp downwards.

THE ADKINS TRUMPET CHART

Description of Trumpet	Length*	Plays	Sounds
Trumpet in F (sounds Perfect 4th higher) ..	2 ft. 10 in.		
Trumpet in E \flat „ Minor 3rd „ ..	3 ft. 3 in.		
Trumpet in D „ Major 2nd „ ..	3 ft. 5½ in.		
Trumpet in C \sharp „ a Semitone „ ..	3 ft. 8¼ in.		
Trumpet in C „ as written	3 ft. 11¼ in.		
Trumpet in B „ Minor 2nd lower ..	4 ft. 2 in.		
Trumpet in B \flat „ Major 2nd „ ..	4 ft. 5 in.		
Trumpet in A „ Minor 3rd „ ..	4 ft. 8 in.		
Bass Trumpet in C Sounds an Octave lower ..	7 ft. 8 in.		

* See foot-note to Horn Chart.

It is perhaps necessary and interesting to devote a little space to describe the various members of the family of Trumpets :—

(1) *The Natural Trumpet.*—The practical compass :—

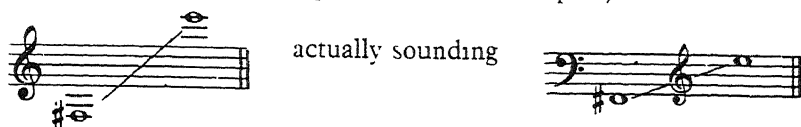


The generator and 2nd harmonic were very difficult to produce.

For articulation, speed of tonguing, trills, harmonic series, weak notes, etc., reference should be made to the chapter on the Cornet. Everything applicable to the Cornet, such as faulty intonation and general technical details, applies to the Trumpet.

(3) *The Bass Trumpet.*—

Fr., Trompette Basse. It., Tromba Bassa. Ger., Basstrompete.
Bass Trumpet in C (complete chromatic compass).

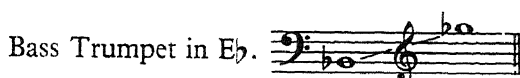
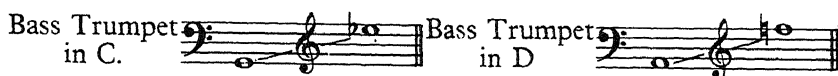


The Bass Trumpet in C was 7 ft. 8 in. long

The bore is cylindrical and narrow with a conical "bell." The length of crook does not affect the brilliance of tone.

As in the case of the French Horn the lower notes were written in the old notation, that is, an octave too low, thus the transposition had to be made by the instrumentalist.

Wagner is an outstanding writer for the Bass Trumpet, his instrument having to be played with three separate crooks, C, D and E♭.



It is generally pitched in C for present-day use, but it is occasionally to be met with when pitched in E♭ and B♭.

The best playing compass (actual sound) is :—



As a matter of fact, the instrument is more of a Trombone than a Trumpet from the point of view of tone, and is midway between the old Alto Trombone and the present-day Tenor Trombone.

(4) *The Flugelhorn.*—Although this instrument is never used in the Military Band, arrangers are occasionally asked to transpose this instrumental part to a suitable instrument when altering a Brass Band score into a Military Band score.

It is really an old German Bugle, having been used for hunting parties. It is a large member of the Bugle family with valves, slides, pistons, etc., added.

The tone is midway between that of the Cornet and Baritone, being rather more mellow than the Cornet and is an instrument of the contralto voice.

The fingering, etc., is similar to that of the Cornet, but the tone is much more sonorous in the lower notes.

The following are typical Trumpet parts in the Orchestra arranged for the Cornet in the Military Band.

Overture "Leonore" No. 3

Beethoven



Selection from "Carmen"

Bizet



Overture "William Tell"

Rossini






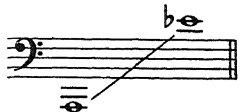
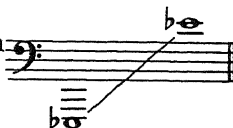
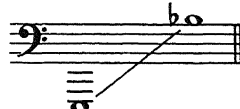


THE B \flat BARITONE OF THE SAXHORN FAMILY

This instrument is a member of the Saxhorn family, which consists of seven instruments. The following is the complete table, together with the actual sounds of their compass :—

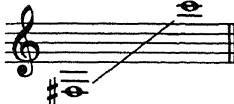
I. E \flat Sopranino. (E \flat Soprano Cornet.)




2. The B \flat Soprano. (B \flat Cornet.) (Plate XX.) 
3. The E \flat Alto. (Saxhorn.) (Plate XXVIII.) 
4. *B \flat Baritone. (Plate XXIV.) 
5. B \flat Bass (Euphonium.) (Plate XXVII.)  with 4th valve. 
6. E \flat Bass (Bombardon.) (Plate XXIX.)  with 4th valve. 
7. BB \flat Bass (Bombardon.) (Plate XXIX.) 

In France and Belgium the whole family of Saxhorns is used.

The instruments were invented by Sax (*see* page 91).

The compass of the Baritone is :— 

the actual sounds being :— 

*This instrument is nowadays only occasionally used in Military Bands.

The harmonic series for this instrument is exactly the same as that for the B \flat Cornet, and all details regarding fingering, trills, etc., will similarly apply.

The bore is conical as with the Cornet.

There has been a misnaming of this instrument, and it has been considered advisable to refer to this point before proceeding with other details.

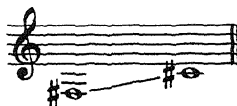
In Germany it is sometimes called B \flat Tenor Horn.

In Austria it is called either Tenor in B \flat or Bass Flugelhorn, the Euphonium being named the B \flat Baritone. In England it has been known as Althorn, but is now the B \flat Baritone.

THE TONAL QUALITIES, ETC.

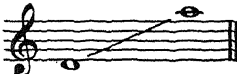
The tone of this instrument cannot claim any individuality. It is not large or sonorous enough to approach the Euphonium, nor is it noble or clear like the Trombone. It is a little stronger than the Flugelhorn. On the whole there is something insipid about the tone, the production of which, however, is easy and the majority of the notes "speak" well.

The Low Register.—



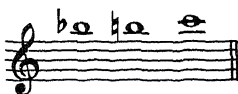
Bad quality of intonation, the notes being rather flabby and toneless. This register is best avoided if writing for the instrument.

The Middle Register.—



Tone production is amazingly simple, rapid execution and florid passages can be played in comfort.

The High Register.—



These notes are inclined to be ineffective, and it would be much better to write them for the 2nd B \flat Cornet or Saxophones.

USES IN THE MILITARY BAND

At an official conference of the Directors of Music of the Navy, Army and Air Force, held in 1921 at Kneller Hall, it was unanimously decided to substitute the B \flat Tenor Saxophone for the B \flat Baritone in the Military Band, on the general grounds of the latter's lack of character and its ineffectiveness.

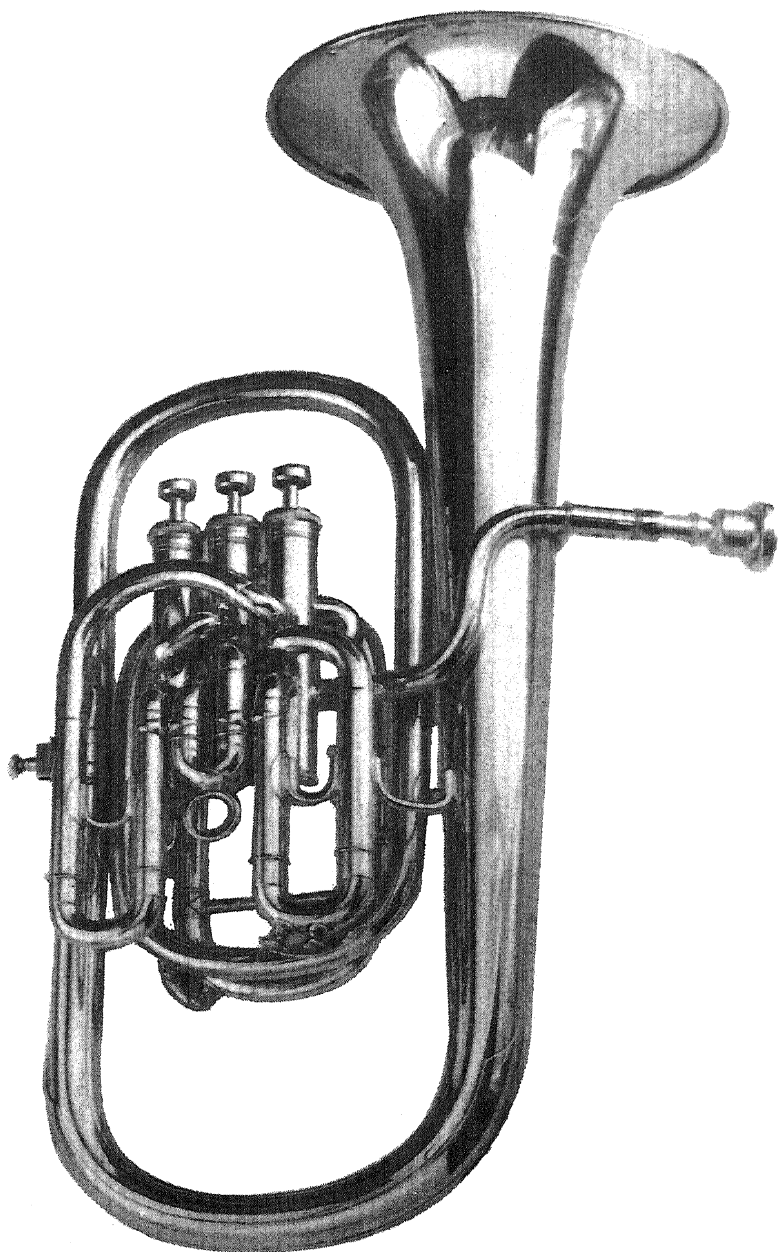
Prior to the above meeting the Baritone had from its invention played a very important part in the brass section of the Military Band. With the improvement of the bore of the Bases and Euphonium it was found that the Baritone was inclined to be thin in quality of tone.

Some Military Bands, however, still employ a Baritone, but they are very few in number.

When used it was generally for melodic parts, such as old operatic arias, etc.

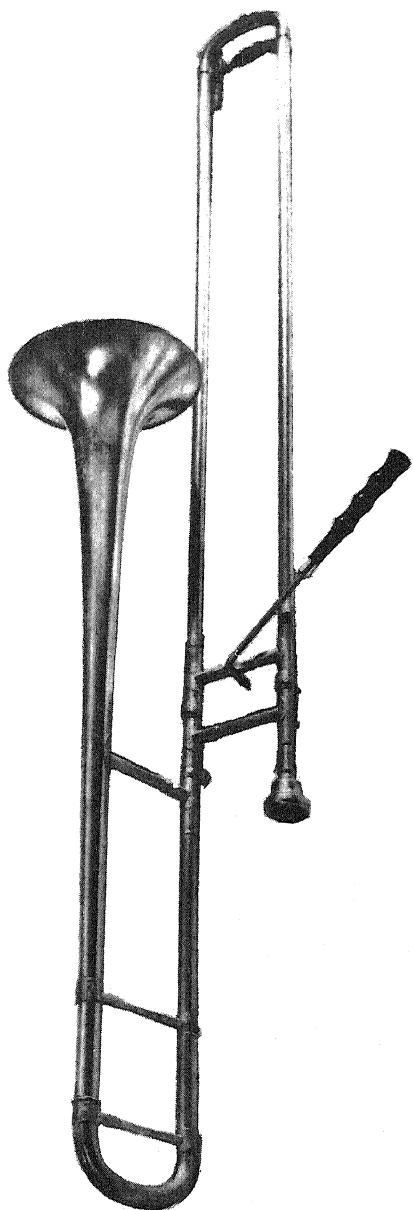
Melodies of a *cantabile* character are best suited to the instrument, and the solos originally arranged for the Baritone should be transferred to the Euphonium or Trombone and the remainder to Tenor Saxophone.

PLATE XXIII



Baritone

PLATE XXIV



G BASS SLIDE TROMBONE

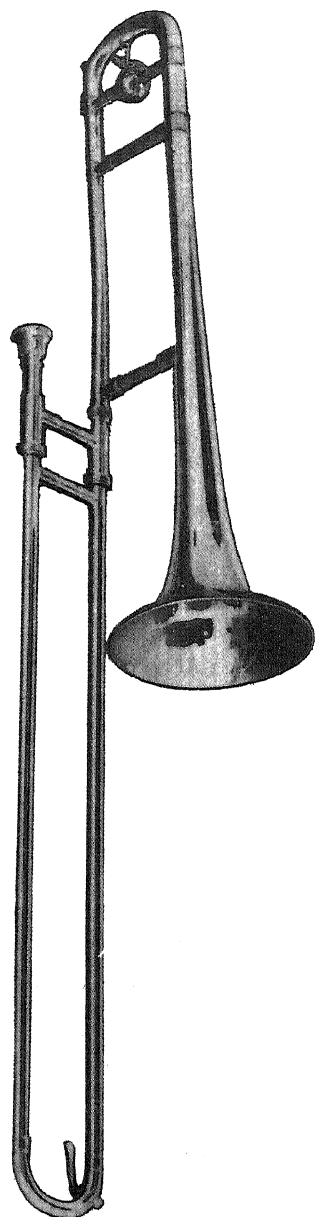
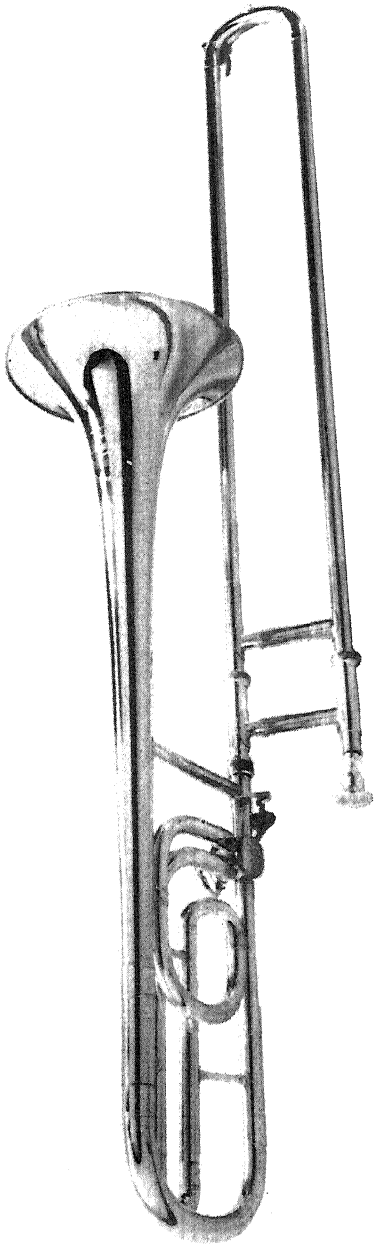
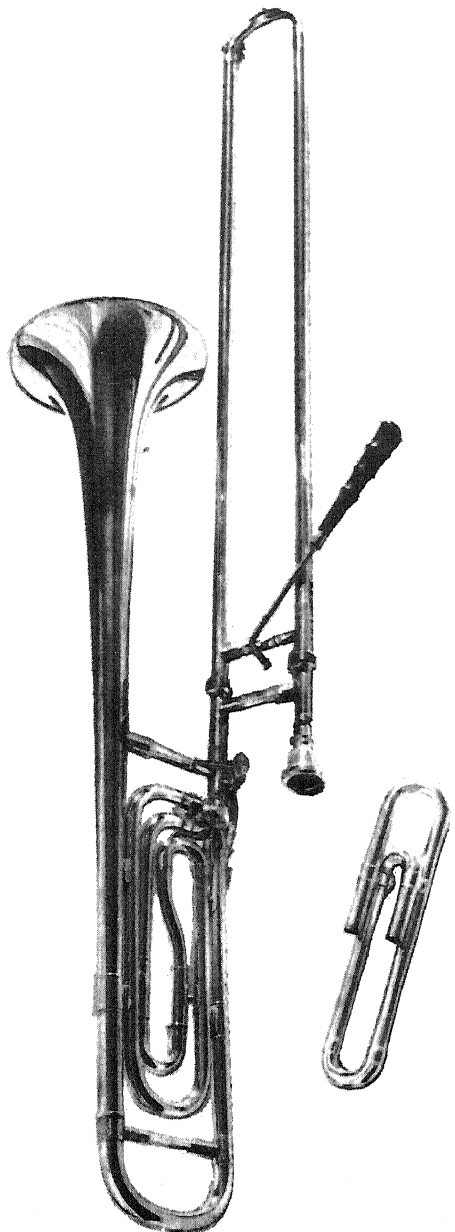
B \flat Tenor SLIDE TROMBONE

PLATE XXV



B \flat AND F LARGE BORE TROMBONE



G AND D BASS TROMBONE WITH C SLIDE

CHART OF POSITIONS FOR THE B₇ TENOR TROMBONE

[illegible]

In the same manner as valved instruments use harmonic fingering to simplify passages that are difficult with scalar fingering, the trombones use harmonic positions to simplify any passage that is difficult when scalar positions are used.

The following extract is taken from the Trombone Solo "Love's Enchantment" by Pryor and will illustrate the above

Tempo di Walz

Scatle Positions 1 3 1 1 3 1 1 3 1 1 3 1 3 1 2 1 2

Harmonic Positions 1 3 4 4 3 1 1 3 4 4 3 1 3 4 5 4 2
4 3 4 4 3 4 4 3 4 4 3 4 3 4 5 4 2

THE TROMBONE

It., Trombone. *Ger.*, Posaune. *Fr.*, Trombone.

Trombones (General Survey of the Complete Family).

The Trombone is clearly related to the Trumpet, hence the origin of the name "Large Trumpet," to which in its various registers it forms the Alto, Tenor and Bass.

It is the most perfect of all brass instruments; every chromatic semitone throughout its entire compass can, by the slide manipulation, be played with perfect intonation, provided the performer has a good ear.

Bore.—Like other members of the Trumpet family, its bore is cylindrical for nearly its whole length, the bell being formed more suddenly than the instruments hereafter mentioned. This accounts for its brilliant and piercing tone. Brass instruments, such as the Cornet, Horn and Euphonium that have a bore which gradually tapers down to the bell have in contrast a mellow tone.

The Trombone is generally made of brass, occasionally, for special purposes, it is made of more expensive metals.

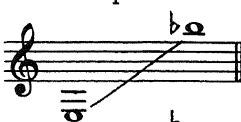




It is played by means of a cup-shaped mouthpiece designed to give the trombone tone.

The Trombone is the simplest form of brass instrument in use, being merely a piece of tubing bent round on itself to form a double section.

Before proceeding to discuss the two members of the family used in the Military Band, the whole family will now be given.

1. The Soprano Trombone.
2. The Alto Trombone.
3. The Tenor Trombone.
4. The Bass Trombone.
5. The Contra Bass Trombone.

The compass of these Trombones being :—

- (1)  Soprano in B \flat (called the Descant Trombone).
- (2)  Alto in E \flat .
- (3)  Tenor in B \flat .
- (4)  Bass in G.
- (5)  Contra Bass in B \flat .

No. 1. *The Descant Trombone* was more of a Trumpet than a Trombone and is now obsolete.

No. 2. *The Alto in E \flat* is now practically obsolete. The tone is very poor and certainly not a good trombone quality. The Trumpet is quite able to do any work required by this instrument and with better effect.

No. 3. *The Tenor Trombone*.—A very useful and important instrument at the present time, in Orchestra, Brass and Military Band combinations.

No. 4. *The Bass Trombone in G*.—Also very useful in the above combinations. The Bass Trombone in F is also occasionally used in the Orchestra.

No. 5. *Contra Bass Trombone*.—This instrument is seldom heard to-day. It is an octave lower than the Tenor.

The Descant and Alto Trombones have been used respectively by Bach, Gluck, Mendelssohn and Mozart. The Contra Bass was used by Wagner.

Nos. 1, 2 and 5 being never used in the Military Band, no further reference will be made to them.

The B \flat Tenor Trombone.—The length is about 9 feet, and the music for it is written in three clefs.

No. 1. Alto Clef (very rare and unusual).

No. 2. Tenor Clef.

No. 3. Bass Clef.

A Trombone player, however, should be able to read in each clef.

THE HISTORY OF THE TROMBONE

It has been mentioned on page 117 that the Sackbut, Horn and Trumpet were very similar in the first phase of their existence, so little remains to be discussed from an historical point of view.

The original name of this instrument, as previously mentioned, was the "Sackbut," and it was also known as such to the ancient Greeks, Jews and Egyptians.

The name was probably derived from "sacabuck," a pump. The use of the slide is said to date back as far as 700 B.C. Certainly, centuries before anything in the nature of a key, crook, valve or any additional appliance was added to an instrument in any form.

Tyrteans (660 B.C.) is said to have invented the slide. An old engraving, the date of the plate being about 200 A.D., is still in existence, which shows an instrument supposed to be a Trombone.

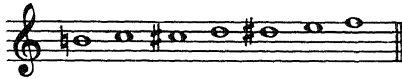
Slide Trombones, in almost as good a state of perfection as those of the present day, were being made by Hans Henchal in 1520.

TONAL REGISTERS

The B \flat Tenor Trombone has a full chromatic compass from

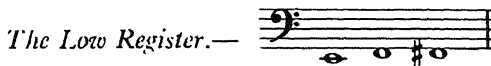


but the following notes are quite possible to an instrumentalist of good technique :—



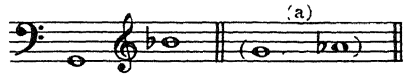
This does not mean that it is advisable to write them, they can be left to the discretion of the performer for solo work.

Owing to the natural state of the Trombone there are no poor notes. The two top notes marked thus @ in the following paragraph, are not quite so sonorous as the surrounding notes, but a good performer can overcome this.

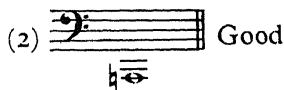


These notes are quite good and strong, but in writing them it must be remembered that they require a great deal of breath.

The remainder of the compass is included in one register, which is quite good, with the possible exception of G and A \flat @, the former being perfected by the use of the 7th Harmonic (see page 154).



Pedals.—These notes are the fundamentals or generators of the notes in each separate position. From a theoretical point of view they should all be possible, but from the practical standpoint they are not. The four pedals which are practicable are quite good notes. Much of, course, depends upon the individual. When writing for the Trombone the greatest possible caution must be used.



Duration of Breath.—The Trombone player is not so capable of holding notes out to such an extent as some other instrumentalists; also the lower the note the more wind required. “*pp*” passages are quite good when sustaining on one note :—




The above example of about six to seven bars at a fair *tempo* is quite legitimate.

Shurred Passages.—These are difficult, especially in the low register where the harmonics are far apart. The upper register does not present the same difficulty.

Tonguing.—At a reasonable speed, combined with an intelligent use of the slide, can be most satisfactory. Double and Triple tonguing is seldom met with, except in *bravura* solo playing.

Trills are not usually written for the Trombone. When used they are produced by lip motion and on the higher harmonics of the instrument where the two notes lie next to one another. The manipulation of the trill requires a very quick movement of the facial muscles.

Perfect trills can only be produced by commencing with the 8th harmonic from  in 7th position.

The intervening semitones between open notes on the Trombone are obtained by the manipulation of the slide, which lengthens the instrument as it is pushed out away from the performer.

The slide is divided into seven positions, each position, of course, becoming slightly longer as the instrument is lengthened. When the slide is right home it is called the 1st position. This corresponds with the open note on valve instruments.

To lower the first position a semitone the slide is pushed out to the second position, and each succeeding position lowers the instrument a further semitone. A glance at the Harmonic Series will make this perfectly clear.

HARMONIC SERIES OF B₇ TENOR TROMBONE

	1	2	3	4	5	6	7	8	9	10	11
	(Generator)										
1st Position Slide closed.											
2nd Position. Slide out 3 3/4 in.											
3rd Position. Slide out 7 in.											
4th Position. Slide out 10 7/8 in.											
5th Position. Slide out 15 in.											
6th Position. Slide out 19 1/8 in.											
7th Position Slide out 23 3/4 in.											

The fundamental notes of the series below the fourth are seldom written.

A careful study of the harmonic chart is very strongly advised. Bad and difficult writing for the Trombone is a fault very easily contracted, and the articulation requires careful thought.

To illustrate this point, a special example (with the positions) has been written :—

Tempo di Waltz (Allegro).

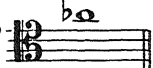
The 7th Harmonic being flat necessitates the position being shortened,

and so the shortened 3rd is used instead of the 5th for

and the shortened 2nd is used instead of the 4th for

The above alternative positions give notes of better quality and easier production.

Some instruments are fitted with a device whereby the 1st position can be shortened, by using extra pressure when the slide is "right home," a spring being depressed which shortens the position, thereby enabling

A \flat ,  a 7th Harmonic, to be taken in the 1st position.

USES IN THE MILITARY BAND

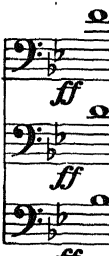
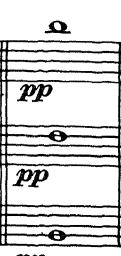
In the band of 25 performers there are two Tenor Trombones, a 1st and 2nd. These two, together with the Bass Trombone, form the triad of Trombones.

The fact that they are written for as concert pitch instruments, yet being called B \flat and G Trombones, is explained on page 14.

In arranging for a Military Band from an Orchestral Score the arranger should be more liberal in his treatment of Trombones. Solos of a declamatory nature are very effective. The instrument is equally good in solos of an exactly opposite nature. The examples at the end of the chapter give both varieties. Passages of a full chordal and grandioso nature are its special forte. Quiet *glissandos* of the American type are quite useful in special effects.

When writing for Trombones, remember the triad and write as for a choir, thus aiming at even balance. In passages of a *cantabile* nature the student should be very careful about the slurs.

In *fortissimo* passages keep your triad in close position, but in *pianissimo* passages a much softer effect will be obtained if the triad is opened out. The following example will illustrate this point:—

Close position	Extended position
	

The following are typical solos for the Tenor Trombone.

"March Heroique"

Saint-Saëns

Allegro
molto staccato
p
etc.

Andante
p
etc.

By permission of Messrs. Durand & Co., Paris.

"Cavalleria Rusticana"

Mascagni

Andantino
mf
etc.

By permission of Messrs. Ascherberg, Hopwood & Crew, Ltd.

"Faust"

Gounod

Larghetto
mf
etc.

In contrast, a passage taken from the storm movement in Rossini's Overture, "William Tell," is given, and also an extract from the Hungarian March "Rakoczy," by Berlioz:—

Overture "William Tell"

Rossini

Allegro $\text{♩} = 108$
ff
etc.

Hungarian March "Rakoczy"

Berlioz


Allegro marcato $\text{♩} = 88$
etc.

Both of the preceding extracts are extremely difficult, and need very skilful manipulation of the slide, synchronised with the movement of the tongue.

THE BASS TROMBONE

Every technical detail discussed with reference to the other Trombones applies in exactly the same way to the Bass Trombone.

It is the bridge between the B \flat Tenor and the Contra Bass.

It has a complete chromatic compass from  B \flat 1 to B \natural 4.

The pedal notes are good, but it is very exceptional to see them written, and they are better avoided.

The length of the instrument when in the 7th position is about 15 feet. The width of the bore at the mouthpiece entrance is just over $\frac{1}{2}$ in., and at the bell about $7\frac{1}{2}$ in. The peculiarity of the tone is explained in the chapter on the Tenor Trombone.

Although termed a G Trombone it is a non-transposing instrument (this is explained on pages 18 and 19).

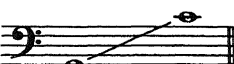
All music for this instrument is written in the Bass Clef even in the Brass Band.

TONAL REGISTERS

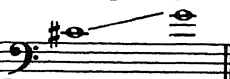
The tone is very full and rich, and although not brilliant it is capable of great dignity in "*ff*" passages, and very impressive in "*pp*."

The Low Register.— 

Is inclined to be "thick," but much depends upon the performer. These notes require a lot of breath if of long duration and "*ff*."

The Middle Register.— 

Full and noble. Really magnificent in passages requiring majestic brass effects.

The High Register.— 

The notes are clear and bell-like, but, naturally, the Tenor Trombones would be more effective here.

The Bass Trombone is the natural bass of the trumpet family, and as such is a very valuable asset. It forms a very fine bass to the quartette of brass (*i.e.*, one 2nd Cornet, two Tenor Trombones and Bass Trombone).

It naturally strengthens the Bases and Euphonium in "*ff*" passages and is occasionally substituted for them.

Blends very well with the Horns and Cornets.

In writing for this instrument great care should be taken in :—

- (a) The breathing places, as it requires much wind power.
- (b) Bad slide movement, as in the case of the Tenor Trombone.
- (c) Too rapid movement.

Two examples of bad slide work :—



HARMONIC SERIES OF THE G BASS TROMBONE

	1	2	3	4	5	6	7	8	9	10	11
1st Position. Slide closed											
2nd Position. Slide out 4 in.											
3rd Position. Slide out 8 1/2 in.											
4th Position. Slide out 12 3/4 in.											
*5th Position. Slide out 17 1/4 in.											
*6th Position. Slide out 22 3/4 in.											
*7th Position. Slide out 28 3/4 in.											

* The fundamental notes of the 5th, 6th and 7th positions are impracticable.

The 7th Harmonic being flat in pitch is sharpened on the slide, but as the 1st Position cannot be sharpened it is taken as the 8th Harmonic of the 3rd Position.

Various examples of prominent passages for Bass Trombone :—

Four Extracts from Overture “ Merry Wives of Windsor ” Nicolai

Allegro vivace

f *sempre staccato* *etc.*

pesante
ff *fff* *etc.*

f *etc.*

marcato *etc.*

The following example is taken from Rossini's Overture “ William Tell ” and needs the greatest refinement of execution :—

Allegro $\text{♩} = 108$

ff *etc.*

This passage from Berlioz's Hungarian March, “ Rakoczy,” is an example of florid writing. The passage itself is magnificent in effect, but extremely difficult to play :—

Allegro marcato $\text{♩} = 88$

ff *etc.*

In all of these passages the Bass Trombone is accompanied by the Basses, Euphonium and Tenor Trombones ; it is seldom, if ever, heard as a solo instrument.

THE TUBA SECTION OF THE SAXHORN FAMILY

On pages 153 and 154 we discussed No. 4 of this family—the Baritone, and now we will treat the remaining three members, viz., 5, 6 and 7, which constitute the Tubas.

No. 5 is the Euphonium.

No. 6 is the E♭ Bass.

No. 7 is the BB♭ Bass.

The object of this work being to make this subject as clear as possible, the above three instruments will be treated as :—

- (a) Members of the Saxhorn family.
- (b) Their individual functions in the Military Band.

The bore of all these is on exactly the same lines as that of the Baritone, but in each case it becomes larger.

The valve mechanism is identical ; when using a 4th valve there is an additional length of tubing, which will be dealt with later.

The use of the cup-shaped mouthpiece is common to all.

The system of fingering and harmonics bears relationship to the Cornet as well as the Baritone.

The difference in the length of tubing between the Sopranino of the family to the BB♭ cannot alter the fundamental principle of tubing, etc., but there is, however, a great difference in the freedom of emission.

In comparison with most instruments in use, the Saxhorns are quite modern.

There are two kinds of Basses in use in the Military Band, the “Upright” and the “Circular” models. Of the two the former is the most generally used, and is the most popular, by reason of its lesser bulk and easier transport.

John Philip Sousa, however, improved on the Circular models by bringing the Bell forward, and widening the Bore, resulting in the instrument now known as the Sousaphone.

The Euphonium is usually referred to as the Baritone in the United States of America and in some Continental countries as well.

THE EUPHONIUM (B \flat TUBA)

The Euphonium is a concert pitch instrument, *i.e.*, non-transposing. It is called a B \flat instrument because it is built in B \flat . (See pages 14 and 15.)

The instrument is about $\frac{1}{2}$ in. wide at the mouthpiece entrance, and gradually expands conically to a width of about 18 in. at the bell mouth.

It is usually made of brass.

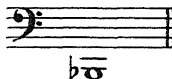
The length is about 9 ft. (as a B \flat Tuba with 3 valves), and the length (as an "F" Tuba with 4 valves) is about 12 ft.

The use of the 4th valve lowers the pitch a perfect 4th, and thereby employs an additional length of approximately 3 ft. of tubing.

The compass of the Euphonium (3 valves) is



with the low B \flat as a Pedal, viz. :—



The Euphonium with 4 valves is able to produce every chromatic semitone from

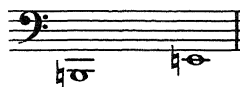


N.B.—Provided that the 4th valve is on the compensating system.

TONAL REGISTERS

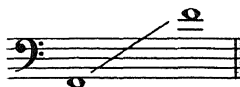
Tone production and quality is good practically throughout the entire compass with the exception of the extreme notes at each end of the register, which are rather weak.

The Low Register.—



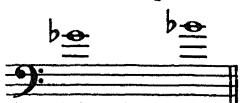
These notes are not as sonorous as those of the middle register ; the low B \flat is a good note.

The Middle Register.—



This is the most useful and effective register of the instrument. All the notes are full-toned and sonorous and capable of good carrying power.

The High Register.—



These notes are not so good as the middle register, but in the hands of a capable performer can be quite effective.

HISTORY

The history of the Euphonium is treated on pages 152-154 (where the whole family of Saxhorns is discussed). It may be added, however, that Mr. Phasey, Professor of the instrument at Kneller Hall in 1859, improved it, and that the Euphonium superseded the Ophicleide in the Military Band.

Mechanism.—Since the addition of the 4th valve many difficulties have been overcome. This, combined with a good technical knowledge of the instrument, leaves very few really impossible passages or fingerings. The 4th valve simplifies many difficulties. Slurred passages of the same fingering are rather difficult, each note having to be produced by the lip without the aid of the valves.

A careful study of the trills, etc., is very strongly advised.

Despite the large bore, tonguing is fairly easy. A passage of the following nature would offer little difficulty :—



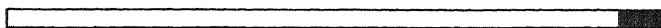
COMPENSATING PISTONS

It is now about a century since piston valves were first applied to brass instruments, and soon after their introduction it was realised that valves used in combination gave notes that were too sharp.

Many attempts were made to overcome this difficulty, but owing to complications of mechanism were not successful until the introduction of the compensating pistons by Boosey & Co.

The remarkable and still growing demand for these pistons is due to their extreme simplicity, to the accuracy of the results obtained, and to the fact that their adoption requires no change of fingering.

The Inherent Defect and its Cause.—In all the ordinary forms of the brass instrument valve, the depression of the piston causes the total air column to be lengthened by tubing sufficient to flatten the pitch a semitone, tone, one tone and a half, or two tones and a half, by the use respectively of the 2nd, 1st, 3rd or 4th valve. So far so good, when the valves are used singly, if the instrument is properly designed and made, but when they are used in combination it is found that the notes produced are sharp. A simple illustration will explain.



Open Tube

“ A ” 2nd valve

If it requires the length of tubing marked “ A ” (which represents the 2nd valve) to lower the open tube a semitone, it is perfectly obvious that “ A ” will not be sufficient to lower the open tube plus “ B,” which represents the 3rd valve, a semitone.

“ B ” 3rd valve

Open Tube

“ A ” 2nd valve

When the 4th valve is brought into use on the Euphonium and Eb Bass the discrepancy is intensified and a remedy has to be found.

Attempts at Correction.—As the defect is due to natural laws it cannot be remedied merely by good workmanship. A player with a good lip and a good ear can do something, but he should not be burdened with such corrections. A means of adding length to the tubing of the valves when these are used in combination is the only true remedy, and as this correction should be both automatic and proportional to the valves employed, a 5th valve, which is sometimes used, does not answer the purpose.

The Problem Solved by the Compensating Piston.—In the compensating piston the extra length required for each valve when used in combination is obtained by a loop of tubing brought into the circuit by two extra passages in each piston. These loops and passages form part of the air column when the 4th piston is depressed in combination with the 1st, 2nd or 3rd, and at no other time. In the three-valve instrument similar extra passages are brought into action by the 3rd valve.

Euphoniums are still being made with either compensating or non-compensating 4th valves. The former model is the superior of the two and is the one referred to in the Treatise.

Students still interested in this subject may like to read the full technical treatise “ THE BOOSEY & HAWKES COMPENSATING SYSTEM FULLY EXPLAINED.”

USES IN THE MILITARY BAND

The Euphonium is an invaluable asset to the Military Band, one only being used in the band of 25 performers, this being quite sufficient for good balance. Rapid execution is easy, and it possesses great carrying power, especially for outdoor performance.

It is capable of great expression and, having a full rich tone, arias and melodies are its special forte. (*See typical solos, pages 175-176.*)

It forms an excellent bass to the Woodwind and Horns, doubles well with the Clarinet, Oboe, Bassoon, Saxophone and Brass. It is very effective on the *bravura* type of solo as well as the operatic type.

It is one of the most versatile instruments in the Military Band and is in the main a melodic instrument.

What the Violoncello is to the Orchestra, the Euphonium is to the Military Band.

In arranging for a Military Band, it is not advisable to write very low harmonies for the Euphonium, owing to its strength of tone ; it causes, in this case, a thick effect against the Bases.

HARMONIC SERIES OF THE EUPHONIUM

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Open															
2nd Valve															
1st Valve															
1st and 2nd or 3rd } Valves .. }															
2nd and 3rd Valves ..															
1st and 3rd or 4th } Valves .. }															
1st, 2nd and 3rd or } 2nd and 4th Valves }															
1st and 4th Valves ..															
1st, 2nd and 4th or } 3rd and 4th Valves }															
2nd, 3rd and 4th } Valves .. }															
1st, 3rd and 4th } Valves .. }															
1st, 2nd, 3rd and } 4th Valves .. }															

gva bassa loco

Euphonium solos from :—

(a) Selection from "Carmen"

Bizet

Moderato

f well marked

ff

etc.

(b) Marche Militaire from Suite "Algerienne"

Saint-Saëns



By permission of Messrs. Durand & Co., Paris

(c) Song "Nazareth"

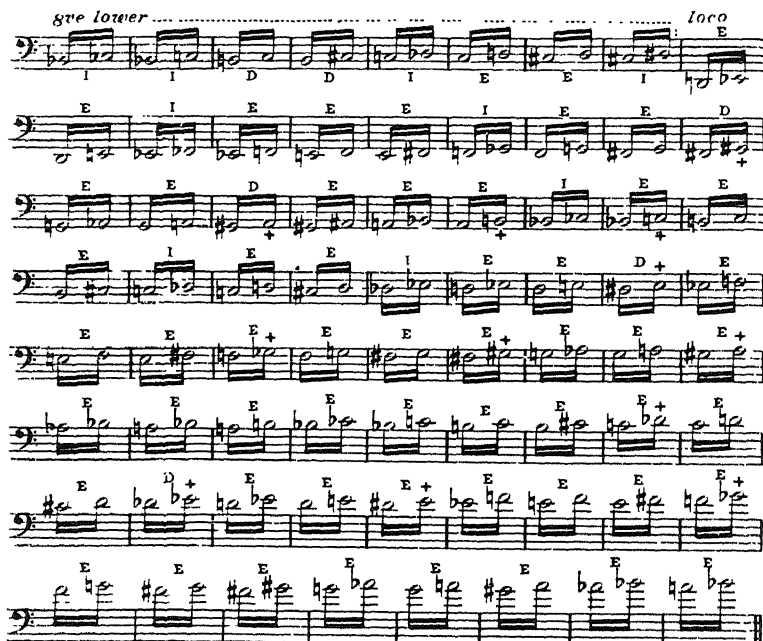
Gounod



The following extract from the Overture "Oberon" by Weber, is an example of an unbroken scalic passage :—



COMPLETE LIST OF TRILLS FOR THE EUPHONIUM



+ Made possible by the employment of the 4th valve. I=Impossible. D=Difficult. E=Easy.

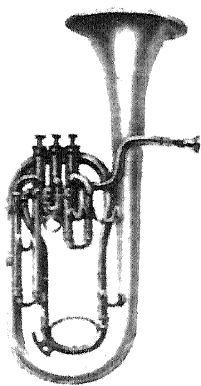
PLATE XXVI



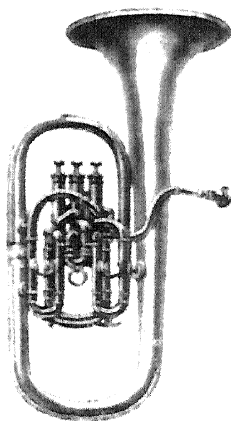
B₇ EUPHONIUM

"BELL FORWARD" MODEL, as used in America

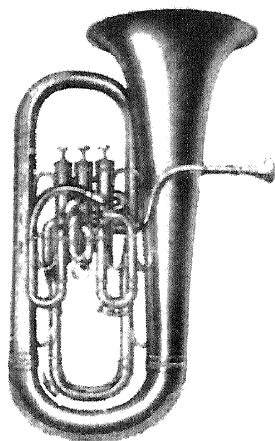
PLATE XXVII



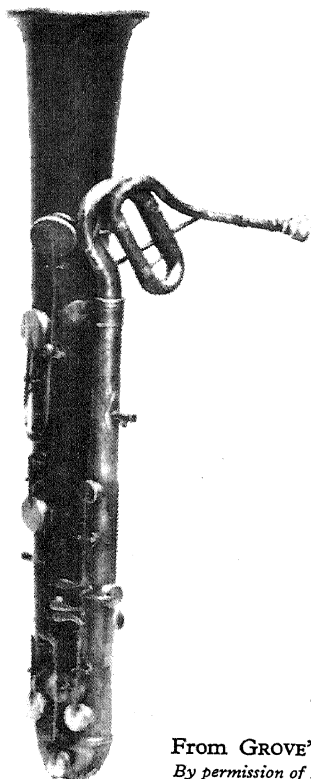
TENOR HORN
OR SAX HORN.



B \flat BARITONE.



B \flat EUPHONIUM.
3 Valves.

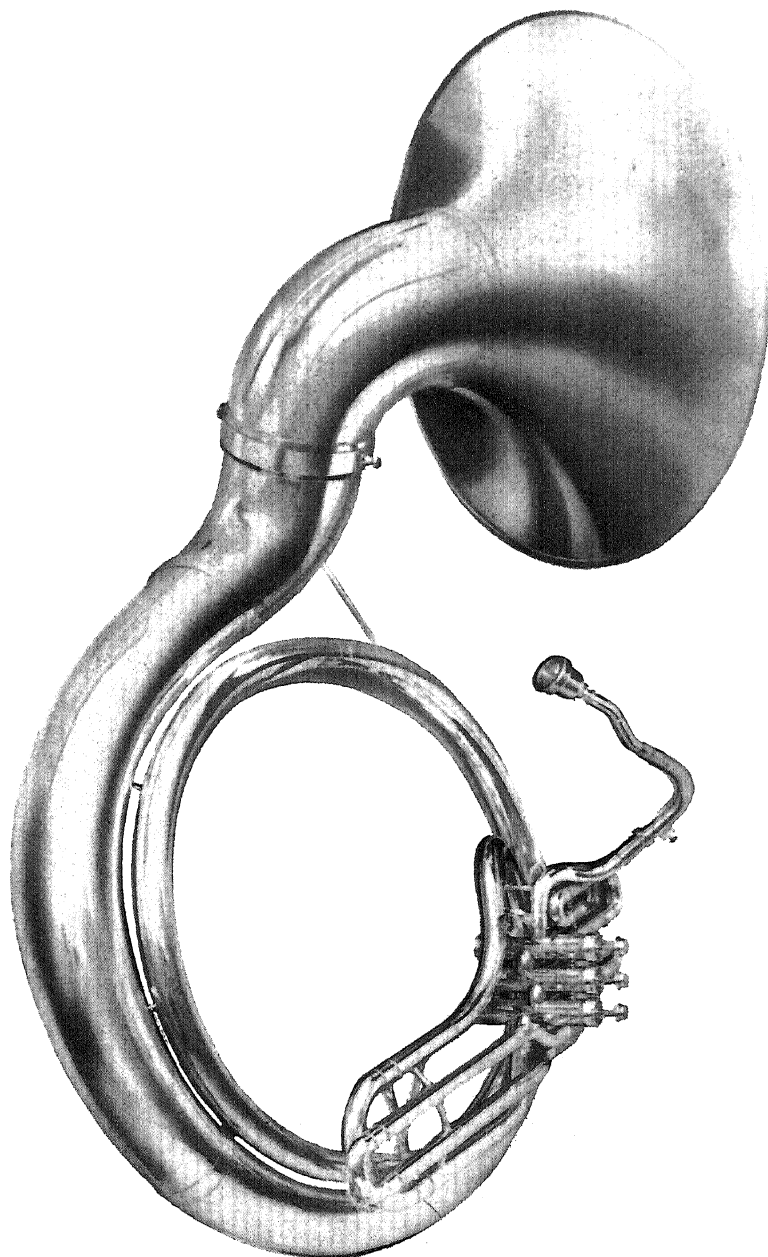


OPHICLEIDE.

(See page 86.)

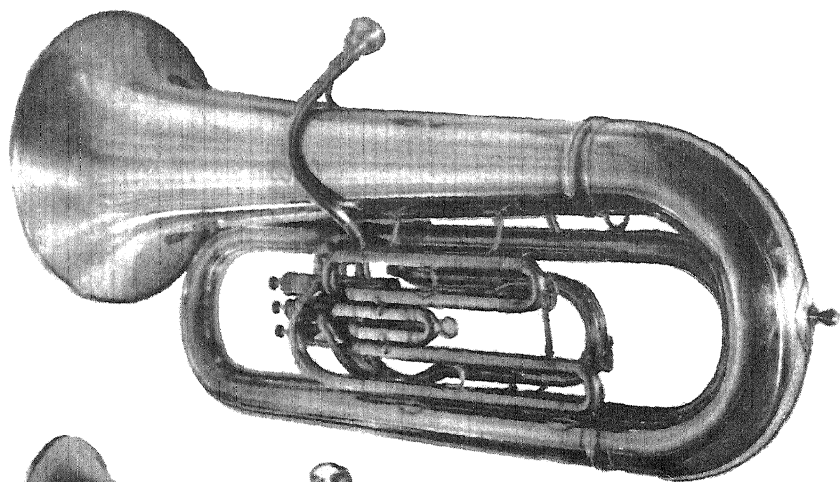
FROM GROVE'S DICTIONARY OF MUSIC
By permission of Messrs. Macmillan & Co., Ltd.

PLATE XXVIII

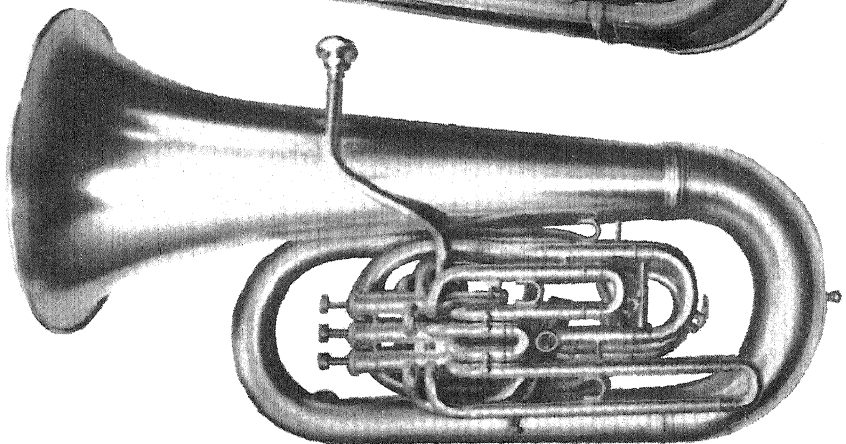


BB♭ SOUSAPHONE

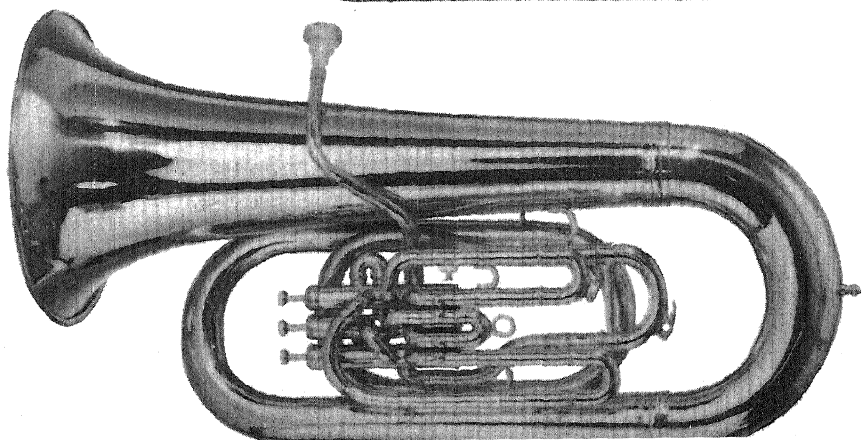
PLATE XXIX



BB♭ Bass



EE♭ Bass, 4 VALVE



EE♭ Bass, 3 VALVE

The use of Harmonic fingering having been explained in previous charts, the following examples will be readily understood :—

Allegro (♩ = 100)

Scatic Fingering:

Simplified with Fourth Valve:

Further simplified with Harmonic Fingering:

Allegro (♩ = 100) *etc.*

Scatic Fingering:

Simplified with Fourth Valve:

THE E \flat BASS (BOMBARDON)

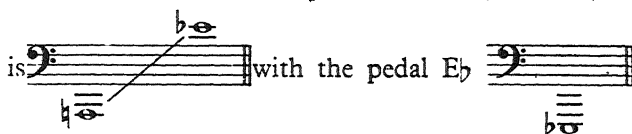
This is No. 6 of the Saxhorn family, and it is also a member of the Tuba family.

The general principles defined for the Baritone and Euphonium hold good for this instrument, *i.e.* :—

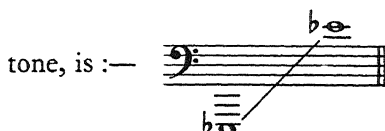
The method of blowing.
Tone production.
Bore and
History.

In size it is larger than the Euphonium, the bore, of course, being wider. As in the case of the Euphonium, the E \flat Bass possesses a 4th valve, which acts in exactly the same manner.

The chromatic compass of the E \flat Bass (without the 4th valve)



The compass with the 4th valve, including every chromatic semi-



It will be observed then that the E \flat Bass produces the lowest note obtainable in the Military Band.

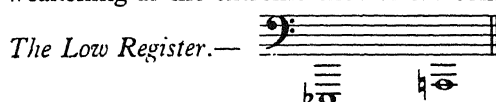
Just as the Euphonium became a Tuba in “F” when the 4th valve was employed, so the E \flat Bass on using the 4th valve becomes a B \flat Bass, but no transposition is made by the performer, this being done by the system of fingering.

The compensating pistons fulfil the same function for the E \flat Bass as for the Euphonium.

The valve system previously explained is equally similar.

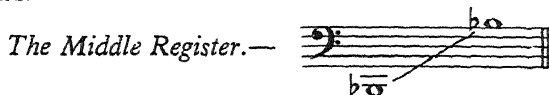
TONAL REGISTERS

As in the case of the Euphonium we have divided the compass of the E \flat Bass into three distinct tonal registers, but the student is reminded that there is no definite break of tone, rather there is their gradual perfection and weakening as the extreme ends of the compass are reached.



These are the notes which become possible by the use of the 4th valve.

The notes are very good in tonal quality, but owing to the depth of pitch they require a large supply of breath. Pedals and sustained harmonies are a feature, and for the function of bass and foundation of the band they are invaluable, and should be written more frequently than is done now. Quite a large number of writers and arrangers for the Military Band merely use the instrument as a Baritone or Euphonium, and not as a Bass.



This is the best register of the instrument for rapid passages generally, but it is really getting into the Euphonium register, which is against the principles of good bass writing. Of course, in running semi-quaver passages it could be used with good effect.

The following illustration is a common form of bad bass writing :—



The arranger does not continue the melodic flow of the passage to the middle register, consequently there is a general feeling that a bass is continually entering.

The following shows how it should be written, this example being easy to play :—



The quality of tone is good, but is obviously not bass tone. It is more in the Cornet or Baritone register. A good facility of execution can be obtained, but it is not advisable to write for the instrument in this compass.

USES IN THE MILITARY BAND

Naturally, this instrument supplies the bass for the Military Band, and is generally assisted by a BB \flat Bass (dealt with on page 189). Sometimes it is even replaced by a String Bass. Pedals and very low harmonies are its special forte. For outdoor marching and general use it is excellent. It is extremely effective in *pizzicato*, as well as in *sostenuto* passages.

HARMONIC SERIES OF THE E₇ BASS

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Open															
2nd Valve															
1st Valve ..															
1st and 2nd or 3rd } Valves															
2nd and 3rd Valves ..															
1st and 3rd or 4th } Valves ..															
1st, 2nd and 3rd or } 2nd and 4th Valves															
1st and 4th Valves ..															
1st, 2nd and 4th or } 3rd and 4th Valves															
2nd, 3rd and 4th } Valves ..															
1st, 3rd, and 4th } Valves ..															
1st, 2nd, 3rd and } 4th Valves ..															

COMPLETE LIST OF TRILLS FOR THE E \flat BASS

one lower.

+ Made possible by the employment of the 4th valve.
 I = Impossible. D = Difficult. E = Easy.
 Never write trills higher than shown in the above Chart.

THE BB \flat BASS (CONTRA BASS TUBA)

The largest member of the Saxhorn family. The bore, the method of sound production and the cup-shaped mouthpiece are similar to the remainder of the family.

It is the largest instrument in use in the Military Band.

It has a full chromatic compass from :—

It will be observed that the E \flat Bass can produce a semitone lower than this instrument; but there are BB \flat Bases, built with four valves, which extends the compass to :—

CHART OF FINGERING FOR THE BB \flat BASS

[illegible]

The following will show, as in previous charts the use of Harmonic Fingering:--

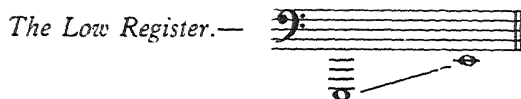
Allegro

Scale Fingerings

Harmonic Fingerings

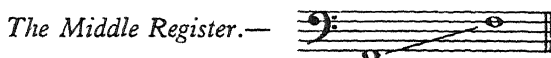
TONAL REGISTERS

The tone of this instrument is extremely sonorous and powerful, and it is an invaluable asset to the Military Band.



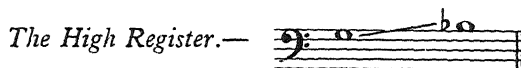
Is full, rich and extremely satisfactory, and its deep organ-like tone is unsurpassed by any other instrument.

Owing to the great length of tubing and the great quantity of breath required, rapid passages are not advised, the instrument being slow to speak in this register. Pedals and very low harmonies and bass passages are very effective.

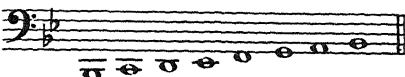


Is a very useful and full-toned section of the instrument. The example given on page 187 on the continuation of scalar passages, etc., applies also to this instrument.

It must be remembered that this is also a good register for the Euphonium, and that the bass being the foundation of the band, should be used when possible in the low register.



The notes are of poor quality and ineffective. There are many other instruments employed in the Military Band capable of playing in this register and certainly with more effect.

The natural scale of the BB \flat Bass is B \flat . 

A chart of fingering and harmonic fingering is added

USES IN THE MILITARY BAND

This instrument, in combination with the E \flat Bass or String Bass, forms the natural bass and foundation of the band. It is a most necessary member of the band instrumentation.

It blends well with all brass instruments. It should be noted that it is quite good and agile in fairly quick scalar passages, both ascending and descending (*see* examples A, B, C and D on page 192).

HARMONIC SERIES OF THE BB^b BASS

	1	2	3	4	5	6	7	8	9	10	11	12
The Open Tube	<i>one lower tone</i>											
2nd Valve												
1st Valve												
1st and 2nd Valves or 3rd Valve												
2nd and 3rd Valves												
1st and 3rd Valves												
1st, 2nd and 3rd Valves												

(A) The following extract from the Overture "William Tell," by Rossini, is an example of an unbroken scalic passage. (See page 172.)



(B) Weber's Overture "Oberon" contains another such scalic passage.



(C) The following passage from the Overture "Der Freischütz" by Weber, is a typical example of the florid bass passages that are to be found in most standard overtures.



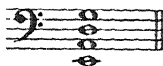
(D) The opening of Schubert's "Unfinished Symphony" is an excellent example of a *legato* passage.



THE STRING BASS

On account of the fact that some Military Bands use a String Bass, it has been considered necessary to make a slight reference to it in this work.

The String Bass is tuned in fourths and has four strings :—



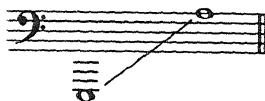
As the use of flat keys is more usual in the Military Band than in the Orchestra, the String Bass is more difficult to play in the former.

To illustrate this point, military band works generally being so often found in the keys of E_7 or A_7 , the three *open* lower strings would hardly ever be used.

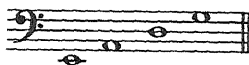
The compass (as written) :—



Actual sounds :—



consequently the four strings are written :—



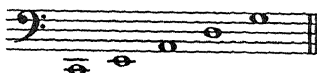
but actually sound :—



By writing the notes an octave higher than the sound, confusion is prevented to the performer, the low notes having so many leger lines.

Although the highest note was given as A, it is not the extreme limit by any means. Being a string instrument, there is always the possibility of players of exceptional ability reaching a much higher compass, but higher notes are not required in military band technique.

On the Continent, String Basses with five strings are in use, the size of the instrument being increased. The strings on this are tuned :—

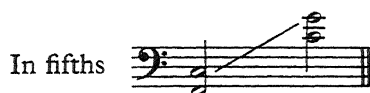
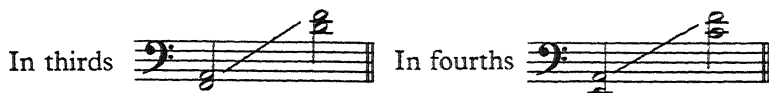


There is no possibility of these instruments being introduced into our Military Band.

Double Stopping.

Although it is highly improbable that a military band String Bass player would be called upon to "double stop" whilst performing with the band, it is worthy of mention.

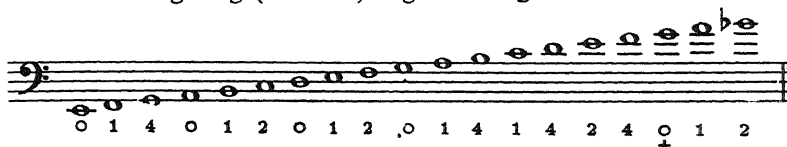
The following are quite practicable :—



Pizzicato is most effective and easy up to a degree of speed, but should not be continued for too long a period owing to the energy required.

Most trills are practicable throughout the entire compass.

A scale of fingering (diatonic) is given for guidance :—



GROUP III. — PERCUSSION

PERCUSSION INSTRUMENTS IN THE MILITARY BAND

<i>English.</i>	<i>Italian.</i>	<i>German.</i>	<i>French.</i>
Kettle Drum.	Timpani.	Pauke.	Timbale.
Side Drum.	Tamburo Militare.	Kleine Trommel.	Tambour.
Tambourine.	Tamburino.	Schellentrommel.	Tambour de Basque.
Triangle.	Triangolo.	Triangel.	Triangle.
Castanets.	Castagnétta.	Kastagnetten.	Castagnettes.
Cymbals.	Piatti.	Becken.	Cymbales.
Bass Drum.	Gran Cassa.	Grosse Trommel.	Grosse Caisse.
Gong.	Tam-Tam.	Tam-Tam.	Tam-Tam.
Tubular Bells.	Campana.	Glocken.	Cloches.
Tubophone.	—	—	—
Glockenspiel.	Campanetta.	Stahlspiel.	Carillon.
Xylophone.	Zilafone.	Xylophon or Strohfiedel.	Xylophon.
Vibraphone.	—	—	—
Celesta.	—	—	—
Dulcitone.	—	—	—
Tenor Drum.	Tamburo rullante.	Wirbeltrommel or Rolltrommel.	Caisse Roulante.
Chinese Drum.	—	—	—
Tabor.	—	Tambourin.	Tambourin de Provence.

*The Rattle, The Anvil, *Wind Machine.

* Though they are not, strictly speaking, percussion instruments, they are conveniently described here.

Before proceeding to discuss each instrument of the percussion family individually they will be divided into their respective classes. In Military Bands they are usually known by the name of "Drums and Effects."

Percussion instruments are divided into two sections :—

- (a) The Autophonic Instruments, and (b) The Membrane Instruments.

These again are subdivided into two more sections :—

- (a) Instruments of definite musical pitch.
(b) Instruments of indefinite musical pitch.

(A)		(B)	
The Autophonic Instruments.		The Membrane Instruments.	
<i>Definite Pitch.</i>	<i>Indefinite Pitch.</i>	<i>Definite Pitch.</i>	<i>Indefinite Pitch.</i>
Bells.	Triangle.	Kettle Drum	Side Drum.
Glockenspiel.	Cymbals.	(Timpani).	Bass Drum.
Tubophone.	Gong.		Tenor Drum.
Xylophone.	Castanets.		Tambourine
Vibraphone.	Chinese Drum.		
Celesta.	Anvil.		
Dulcitone.			

The Autophonic Class.—The sound is produced by the vibration of solid bodies, either wooden or metallic.

Bells.—Sound produced by striking with a wooden bell hammer or a pig skin hammer.

Glockenspiel }
Tubophone } Sound produced by striking with wooden sticks.
Xylophone }

Triangle.—Sound produced by striking with an iron beater.

Cymbals.—Sound produced by striking with (a) One cymbal struck against the other, and (b) with a stick.

Gong.—Sound produced by striking with a drum stick with felt head.

Castanets.—The instrument is held firmly in the hand, and is shaken by the movement of the hand, from the wrist. This sets in motion the two loose heads, which vibrate as they come into contact with the main body.

The Membrane Class.—The sound is produced by the vibrations of a stretched skin or membrane.

(a) The Timpani.—Struck by hard felt sticks.

(b) The Side Drum.—Struck by hard wooden sticks.

(c) The Bass Drum.—Struck by felt-covered stick.

(d) The Tenor Drum.—Struck by felt-covered sticks as in (c), but smaller in size.

(e) The Tambourine.—(1) Shaking ; (2) rubbing the thumb along the skin in a circular motion ; and (3) struck with the fingers.

The percussion department of the Military Band is much neglected from the musical point of view, and very badly treated from the unmusical standpoint. Nothing is more annoying than the continual hammering of a Bass Drum and Cymbals, yet in bands of good standing it is a very common abuse.

This section of the band can be utilized to an astounding degree.

The author has given special attention to this section of the band to prove the usefulness and musical possibilities.

Having 25 performers in the band it is fairly easy to train a second or third Clarinet player, or for that matter any other member of the band, to play the Xylophone, Bells, etc., with an amazing degree of efficiency.

In the Kneller Hall band the author makes a feature of trios for Tubular Bells, Glockenspiel and Xylophone, which have amply demonstrated the musical value of these instruments.

If two members of the band are employed solely as drummers, it is quite a simple matter for one to be trained to play the Xylophone, Glockenspiel and Bells, but where only one is employed another member must do the work required.

THE SIDE DRUM

The Side Drum is the smallest of the Drums. It is cylindrical in shape, but has no definite depth. At each side of the cylinder or "shell" is a parchment "head," *i.e.*, a permanent piece of prepared sheep skin.

The "heads" are lapped over small wooden hoops, which are themselves pressed down and kept in place by larger hoops. The heads are kept taut (braced) by means of brass rods and thumb screws or cords and leather tags. The upper head is called the "batter head" and the lower head, containing the "snares," the "snare head."

Snares are thin pieces of catgut, like a rough 'cello string, or coiled steel wire stretched across the snare head and fastened by means of a brass knob on one side and a screw hook on the other. The snares give the necessary peculiar quality and brilliance to the Side Drum.

Two sticks, made of hard wood with a small "pear drop" knob at one end of each, are used.


When the performer attacks the batter head the vibratory waves set up are communicated to the snare head, and so to the snares. The immediate effect of this is to alter the character of the sound waves and double the number of vibrations.

The three most important beatings of the Side Drum are:—

(a) The Roll. (b) The Flam. (c) The Drag.

(1) The "roll" is acquired by the performer playing double alternative strokes with each hand, *viz.* (LL.RR.LL.RR.). In each pair of strokes, the latter by incessant practice becomes a kind of controlled rebound stroke.

(2) The “flam” consists merely of two notes in the following

rhythm:—  When the first note of the “flam” is on the accented beat it is called an “open flam,” and when the second note is on the accented beat it is called a “closed flam.”

(3) The “drag” is a series of two, three, four, five or six strokes fused into a kind of short “roll” preceding the accented note:—



The quality of the Side Drum is hard, dry and bright, giving a peculiar perky and obstinate impression. It is absolutely indispensable in the Military Band, being naturally associated with all ceremonial parades.

For funeral purposes it is muffled or draped, which gives it a most mournful and dismal effect.

The following solo for Side Drum is from “La Bohème” by Puccini (Military Band arrangement), and is used in combination with two Piccolos and muted Trumpets.

Alta marcia ♩ = 132

Piccolos. 

Side Drum. 

By permission of Messrs. Ricordi & Co.

In the Military Band, for programme music, the Drum rests on a stand, but on the line of march it is carried by means of a sling.

Beside the usual necessary employment of the Side Drum in the Military Band it is used occasionally for special effects.

Recently a silk “head” has been used with great success. The superiority of a silk “head” over a parchment head is that it is impervious to rain, heat and atmospheric changes. Thus, the “snap” or true side drum tone is kept, irrespective of weather conditions.

THE BASS DRUM

This instrument has a wooden shell of cylindrical shape, the depth being narrow in proportion to its diameter.

The parchments (similar to those of the Side Drum) are stretched at both ends over hoops, with tags and braces working on a long rope. The Bass Drum has no snares. The stick has a large head, covered with felt.

It is obviously necessary for use on the line of march, but its continued use for programme music in preference to the Timpani is to be deplored.

Further reference to this will be made in Part II (Arranging for Military Band).

Solos for the Bass Drum are rare.

The following example is from the March "Le Prophète," by Meyerbeer :—



THE TABOR

The Tabor is unlike other drums in that it is so many times longer than its diameter, and that the snares are passed over the batter head. It is not used in the Military Band, and no further reference will be made to it.

THE TENOR DRUM

In appearance and size it is midway between the Side Drum and Bass Drum. It is never used in the Military Band.

THE TIMPANI (KETTLE DRUM)

This is the most important instrument of the percussion family. It consists of a basin-shaped shell made of copper, across which a circular sheet of parchment (the head) is stretched. The head is lapped over a wooden hoop, called the "flesh" hoop. This is held in position by a circular iron ring, and the whole is clamped down by a brass T-shaped screw.

The pitch is produced by tightening or loosening the screws. At the bottom of the shell a hole is pierced in order to lessen the violence of the air concussion and also for preventing the head from splitting.

Pedal timpani are now in common use. The principle is the same as for the other timpani with the exception that the tuning is done with the foot pedal. Depressing the pedal raises the pitch and *vice versa*. The advantages of this system are obvious in comparison with the slower method of hand-tuning.

The head is played upon by two sticks each about one foot in length, and capped by a small felt ball.

The Timpani is made in three or four sizes, but no definite size can be given.

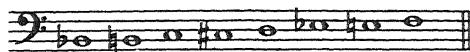
(1) *The Large Timpani* can be turned to all the following semitones, and is the bass of the Timpani family :—



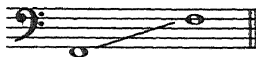
(2) *The Intermediate Sizes*.—There are two of this class as follows :



The small Timpani can be tuned to any of the following semitones :



It will be seen that the two Timpani (large and small) are capable of the range of an octave.



It is these two instruments which the author advises for use in the Military Band. There is a smaller Timpani in existence, but it is very seldom used, and is best avoided, as its intonation is poor.

The chief advantage in the use of the Timpani is that it is wholly rhythmical, and yet has a pure tone. There is no comparison between this instrument and the Bass Drum. (Solos for the Timpani are given on the following pages.)

The manner of writing—The Roll.



(This is the correct manner.)



(Wrong.)



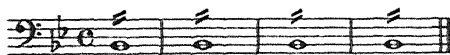
Variation of tone.



Variation of tone.



Variation of tone.



An old method of writing.



Change of Timpani.

The following are examples of more elaborate rhythms :—

Allegro $\text{♩} = 116$

$\text{♩} = 120$

$\text{♩} = 100$

$\text{♩} = 120$

$\text{♩} = 100$

$\text{♩} = 80$

$\text{♩} = 75$

$\text{♩} = 60$

etc.

The following is the Timpani part of the Overture "Hibernia," by J. E. Adkins, and arranged by the Author for Military Band. It is extremely effective and very rhythmical.

in E♭ & B♭



"The Grasshoppers' Dance"

Bucalossi

(Two illustrations of the employment of the various percussion instruments.)

Andante

Side Drum

Triangle

Glockenspiel

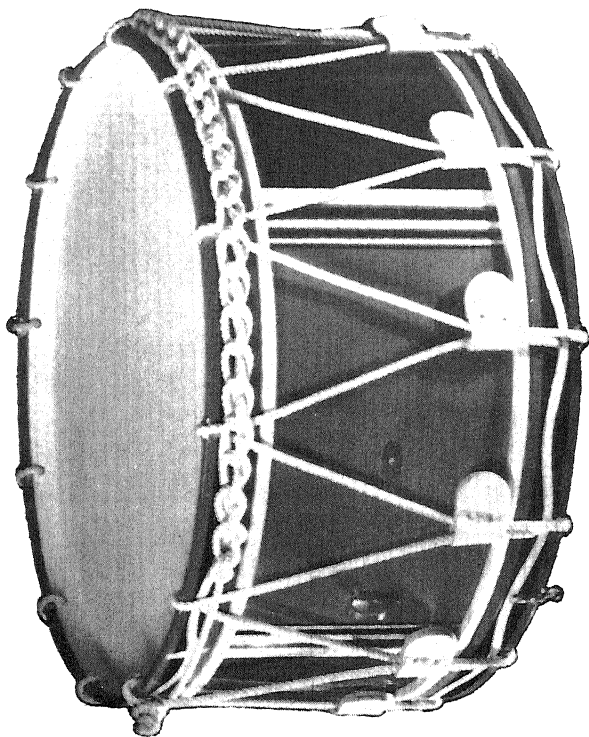
Xylophone

A musical score for four percussion instruments: Side Drum, Triangle, Glockenspiel, and Xylophone. The tempo is marked 'Andante' and the time signature is 2/4. The key signature has one flat. The Side Drum part starts with a rest followed by a series of eighth notes marked *mf*. The Triangle part starts with a series of eighth notes marked *p*. The Glockenspiel part starts with a rest followed by a series of eighth notes marked *f*. The Xylophone part starts with a series of eighth notes marked *p*. The score includes various rests and melodic lines for each instrument, with the Glockenspiel and Xylophone parts ending with 'etc.'.

Andante

A musical score for two percussion instruments: B.D. & Cym. (Bass Drum and Cymbal). The tempo is marked 'Andante' and the time signature is 2/4. The key signature has one flat. The B.D. & Cym. part starts with a series of eighth notes marked *ff*. The score includes various rests and melodic lines for each instrument, with the B.D. & Cym. part ending with 'etc.'.

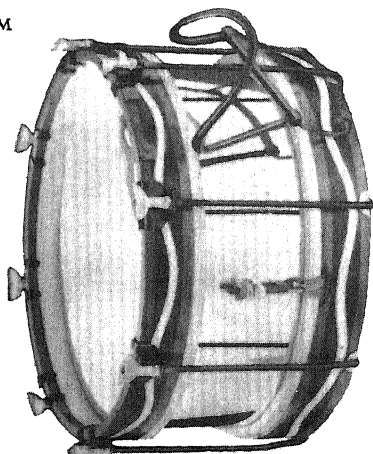
PLATE XXX



ROPE BASS DRUM

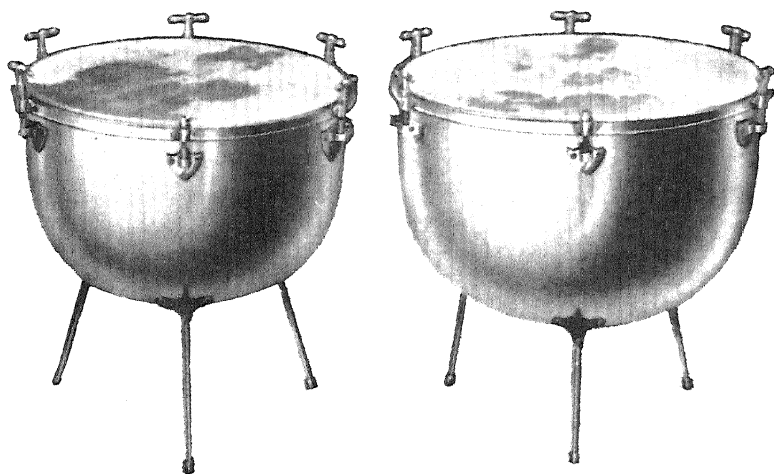


GUARD'S PATTERN SIDE DRUM

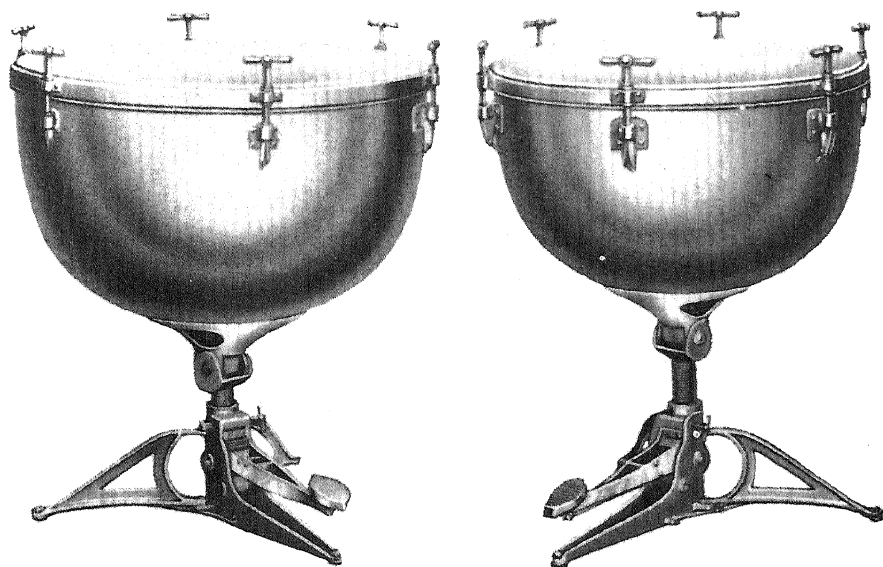


NARROW PATTERN ROD SIDE DRUM

PLATE XXXI

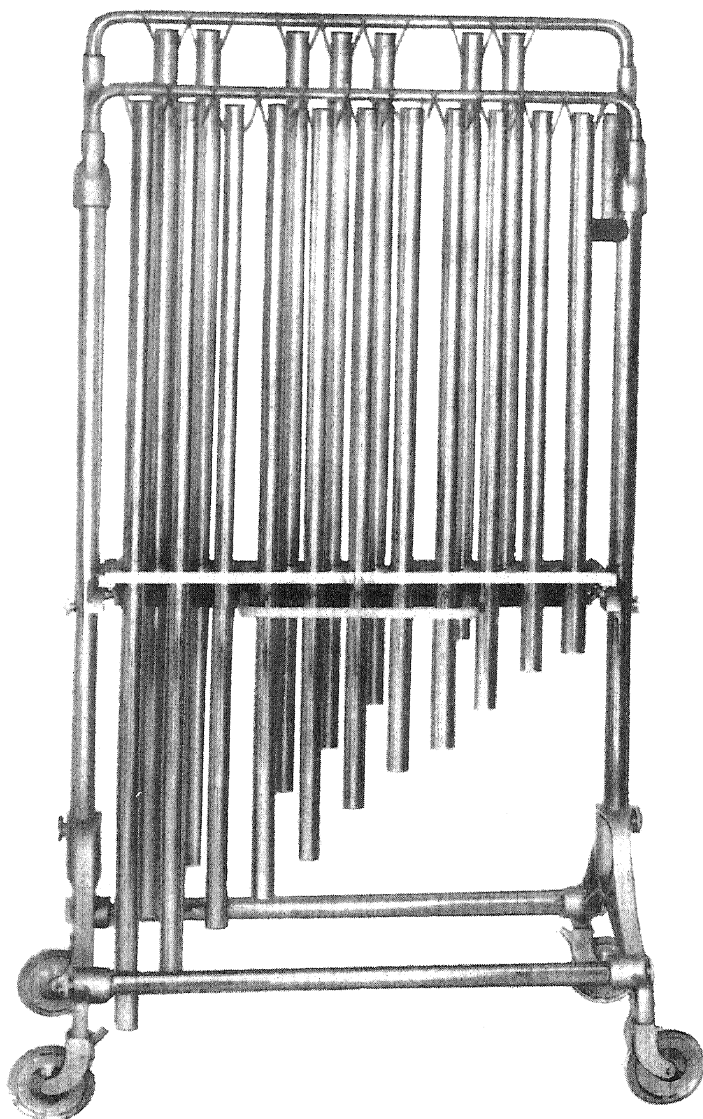


PAIR OF ORCHESTRAL KETTLE DRUMS



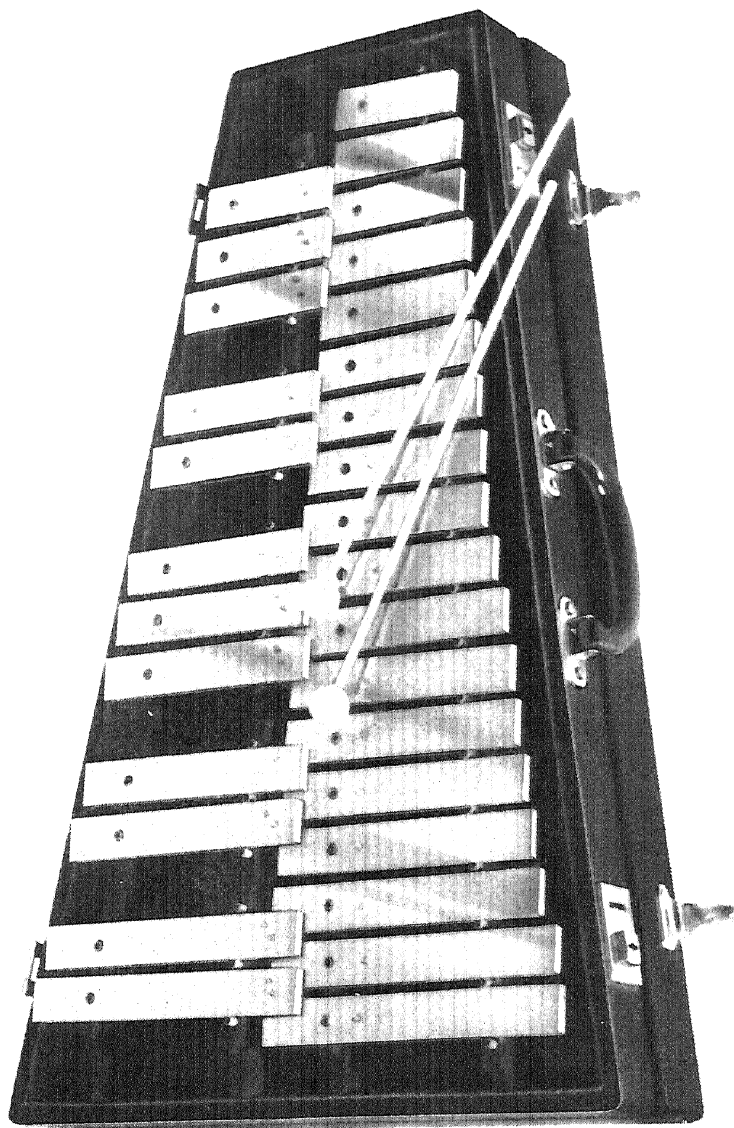
IMPROVED MODELS OF PEDAL ORCHESTRAL TYMPANI

PLATE XXXII



TUBULAR BELLS

PLATE XXXIII



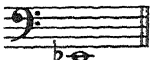
GLOCKENSPIEL

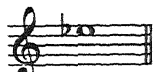
TUBULAR BELLS

Tubular Bells are made in varying diameters from 1 in. to 2½ in., the latter giving a very sonorous and musical tone. The length varies in proportion.

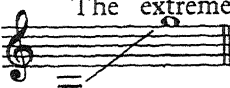
The Bells hang from a frame which is either single or double in pattern. The latter is advised because the arrangement of the Bells is then similar to that of the pianoforte keyboard.

The actual pitch of the Tubular Bells has never really been solved. There are two distinct notes: the tap-note and the hum-note. If

a composer writes this  he is far more likely to get something

nearer this note  and will be quite satisfied that he can hear

the low note, though he could just as easily imagine the higher octaves.

The extreme chromatic compass of the sets generally used is  Lower notes are obtainable, but they are of doubtful quality.

Some composers write in bass clef and some in treble clef, but the latter is the more usual custom.

All Military Bands, however, are not equipped with the full chromatic set, a good many possessing merely a simple set of eight diatonic bells of the scale of E♭. This very much restricts these bands in the number of bell solos they can perform.

Passages of the following nature should be reserved for the Glockenspiel, as it is an example of very bad writing for the Tubular Bells.



The Tubular Bells have been introduced with magnificent effect by the author, in the Military Band arrangement of "Norwegian Carnival," by Svendsen, the following being a short extract:—

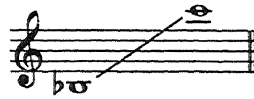
By permission of C. F. Peters

The use of the Bell in the "Prison Scene" in Verdi's opera, "Il Trovatore," is so well known that an example is hardly necessary.

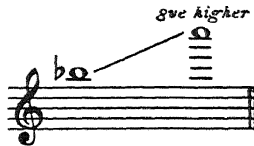
THE GLOCKENSPIEL

The Glockenspiel is a small instrument consisting of 30 small steel bars arranged in the same style as the keyboard of the Pianoforte G to C. The bars are struck with small beaters.

The written compass is G to C:—



sounding (two octaves higher).



The instrument is a development of the Continental church carillon.

The Glockenspiel is used generally for novelty purposes in the Military Band, but it is also used in many classical works by such composers as Handel, Mozart, Wagner and Saint-Saëns.

The following examples illustrate its use in the Military Band :—

“ Petite Suite de Concert ”

S. Coleridge-Taylor

Allegro vivace



Scherzo

" L'Apprenti Sorcier "

Paul Dukas

Quick

Glockenspiel

Band

By permission of Messrs. Durand & Co., Paris.

Selection

" Cavalleria Rusticana "

Mascagni

Allegretto ♩ = 80

By permission of Messrs. Ascherberg, Hopwood & Crew, Ltd.

The Glockenspiel was originally carried on the line of march by Military Bands, but this is not done nowadays. It was carried in the same manner as a banner, and held at an angle of 75 degrees. It was decorated with horse-hair loops, and generally carried the regimental crest.

The bars were in front of the performer, who hit them with very hard wooden sticks.

Solos for either the Glockenspiel, Xylophone or Tubophone can be changed from one instrument to another according to the fancy of the Conductor.

THE TUBUPHONE

The Tubophone bears a great resemblance to the Glockenspiel, but in place of the small metal bars and resonators it has small metal tubes, really miniature Tubular Bells, arranged horizontally in the same manner as the keyboard of the Pianoforte.

The bells are struck with small wooden sticks similar to those of the Glockenspiel, and is now more popular with Military Bands.

The written compass is :—



Sounding two octaves higher :—

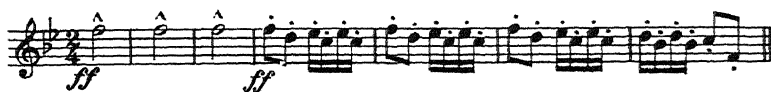


It is used as a novelty item in the Military Band, and there is no instance of its use by any great composer. Its alternate use with the Xylophone or Glockenspiel adds colour to the percussion department.

Any solos for the Glockenspiel or Xylophone can be played equally as well on the Tubophone, especially out of doors, as the latter is much more vibrant and the sound carries much better.

Selection "Les Cloches de Corneville"

Planquette



THE XYLOPHONE

The Xylophone consists of a series of wooden bars either $3\frac{1}{2}$ octaves (F to C) or 4 octaves (C to C) and sounds an octave higher than the written notes.

It is an instrument of great antiquity and was played with spoon-headed beaters made of some light wood, usually willow. Now round-headed beaters are used, which are fixed to flexible cane stems.

The wooden bars are ranged in the same manner as the keys on the Pianoforte. Under each wooden bar is a metal resonator. The bars are generally made of rosewood, this so far proving the most successful material. Rapid execution, scalic passages, *arpeggi*, succession of thirds and sixths in quick *tempo* are specially suited for the instrument. Its use in the duet is extremely effective and it can be used in compositions of a tuneful and fairly quick *tempo*.

Examples of its employment in the Military Band are given :—

Xylophone Solo

"Xylophobia"

Earle Brigham

Fast ♩ = 144

Xylophone

448

Band

Ballet

" La Boutique Fantasque "

Rossini-Respighi

Can-Can (*allegro*)

pp Xylophone Eb Clt. & Picc. etc.

By permission of Messrs. J. & W. Chester Ltd.

" The Dance of the Tumblers " Rimsky-Korsakov

$\text{♩} = 160$

ff etc.

Coll gva bassa

Xylophone Duet

" The Two Imps "

Kenneth J. Alford

Allegro

etc.

p Solo Clts. & Alt. Sax. 2nd time only

Xylophone Duet

" Glad Chatter "

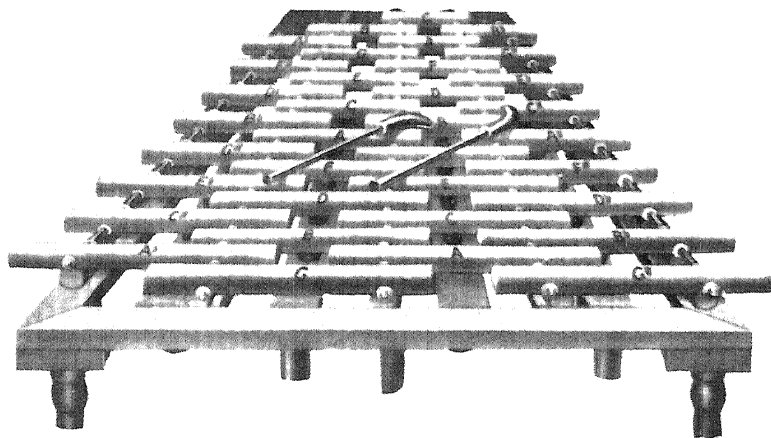
Earle Brigham

2nd time only

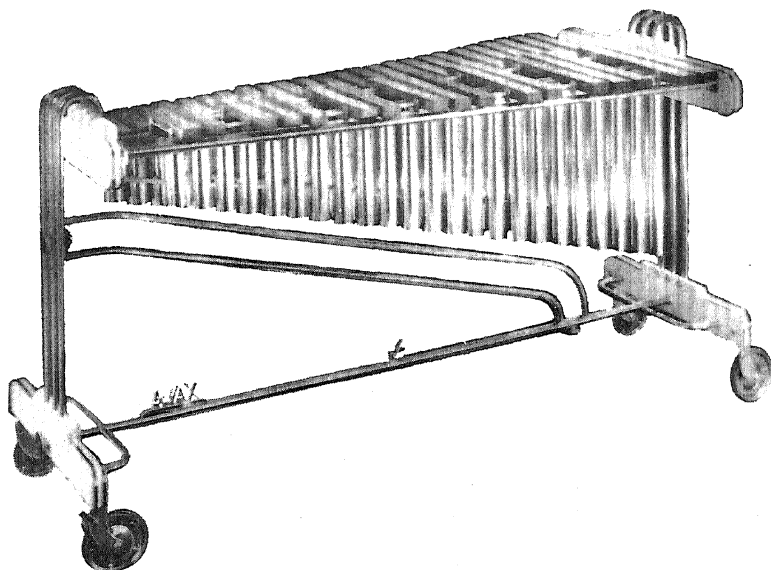
p Solo Clt. & Alt. Sax.

p Hns. & 1st Tromb.

PLATE XXXIV

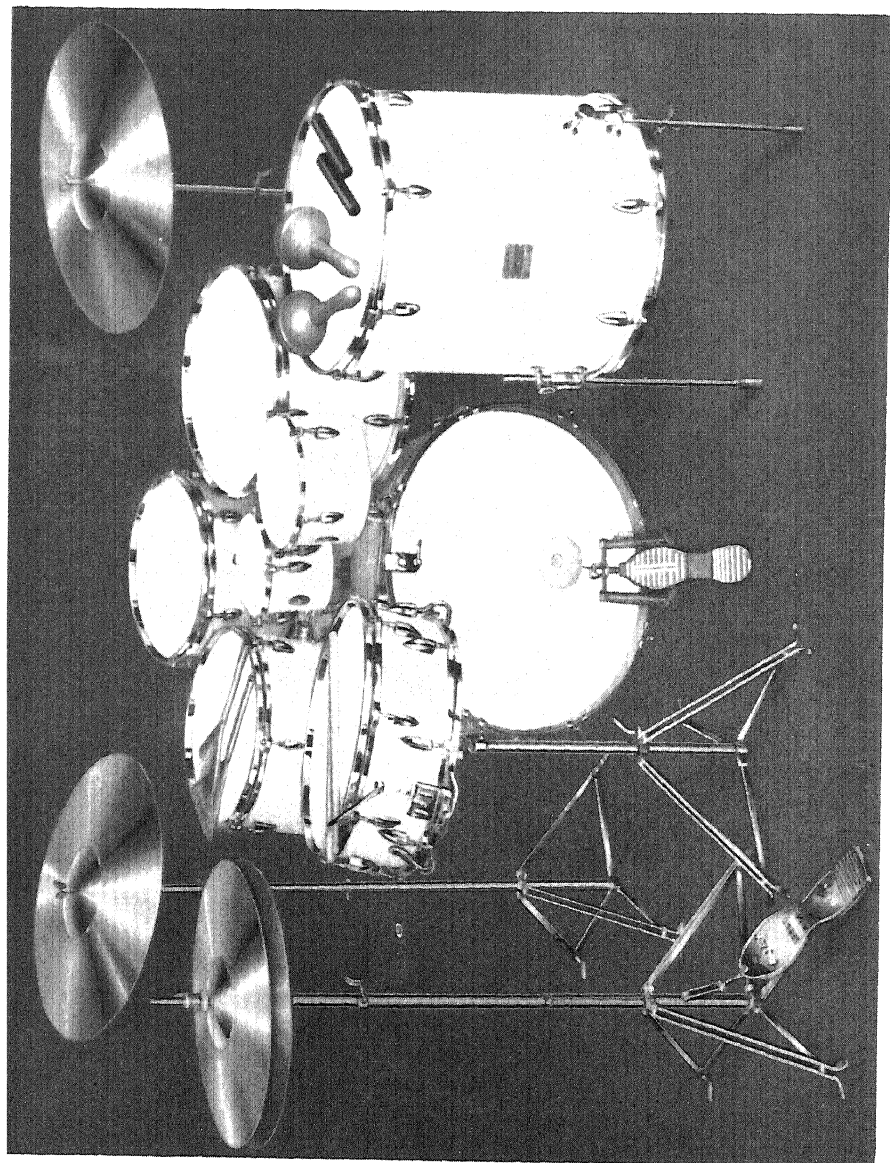


THE XYLOPHONE. (Old pattern.)



THE XYLOPHONE. (Modern pattern.)

PLATE XXXV



MODERN DRUMMER'S OUTFIT

THE MARIMBA

The Marimba is a downward extension of the Xylophone to one and a half or two octaves below.

The chief feature is the mellow and organ-like tone of this extension with the brittle and sparkling tone of the upper register.

The lower register is always played with soft sticks owing to the production of overtones when hard sticks are used. No music has been published for this instrument but it is a simple matter to adapt existing scores with great effect.

THE MARIMBA-XYLOPHONE

This is a combination of the Xylophone and Marimba in one instrument and has all the qualities of both instruments. All that is necessary is to change from hard to soft sticks and *vice versa*.

THE TAMBOURINE

The Tambourine is one of the oldest of percussion instruments in present-day use. Traces of it are found as far back as 600 B.C., and it is interesting to note that it is almost unaltered in design since its original use.

In construction it is merely a round wooden hoop to which is fixed a parchment head. In the hoop are holes or gaps cut at intervals, in which are placed jingles fixed on wire.

The methods of use are :—

- (a) By shaking the instrument, giving the effect of a roll.
- (b) Rubbing a damp thumb against the parchment head, giving a very close roll.
- (c) By striking the Tambourine with the knuckles or fingers, thus producing a definite rhythm.
- (d) The clashing of the head of the Tambourine on the knee or elbow for "*ff*" attack.

The following is a good example of its use :—

Suite "Casse Noisette" "Danse Arabe"

Tschaikowsky

Allegretto ♩ = 104

Tambourine

Band

morendo

ppp

THE TRIANGLE

The Triangle derives its name from its shape, being merely a rod of steel about $\frac{3}{8}$ in. thick, bent into the shape of a Triangle. It is beaten with a small steel beater of its own thickness. Schumann is supposed to have been the first composer to introduce it into the Orchestra.

A roll is produced by the rapid movement of the beater to and fro in the top corner of the instrument. This can be used with excellent effect in soft wind passages, but if used excessively it becomes monotonous.

In the Military Band arrangement of Grieg's Suite "Peer Gynt," the third movement, Anitra's Dance, starts and finishes with a high reed chord accompanied by a Triangle roll.

In the following example the Triangle is used with delightful effect :—

Suite, "Casse Noisette."

Marche

Tschaikowsky

The musical score is for a piece from Suite "Casse Noisette" by Tchaikovsky. It features two staves. The top staff is for the Triangle, marked "Solo" and "Triangle". It begins with a treble clef, a key signature of one flat (B-flat), and a 2/4 time signature. The melody consists of eighth and sixteenth notes, ending with a double bar line. The bottom staff is for the Band, marked "Band" and "Woodwind". It begins with a treble clef, a key signature of one flat, and a 2/4 time signature. The music is marked "mf" (mezzo-forte). It features a complex rhythmic pattern with many beamed sixteenth and thirty-second notes, and rests. The piece concludes with a double bar line and the word "etc." written above the staff.

THE CASTANETS

Castanets (*see illustration*) consist of hard wood or ebonite, and are made single or double, *i.e.*, the clappers being either at both ends or at one end only.

At each end of the handle is a flat blade with two loose cup-shaped pieces of wood fastened by means of gut or elastic, one on each side of the fixed blade.

On the movement of the wrist the two outside blades are clapped together against the centre blade, causing a sharp brittle sound.

The Castanets are usually employed in music of the bolero type, and, being a favourite instrument of percussion in such countries as Spain and South America, it naturally plays a very important part in the music of those countries.

The following are the typical rhythms employed :—

Serenade Espagnole

" La Manola "

Eilenberg

Bolero



etc.

Spanish Dances

Moszkowski

Tempo di Valse



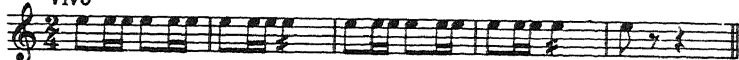
etc.

By permission of C. F. Peters

" Capriccio Espagnol "

Rimsky-Korsakov

Vivo



etc.

By permission of Editions, M.P. Belaieff

THE CHINESE DRUM

The Chinese Drum is a hollow piece of wood, rectangular in shape, and about 4 in. in length. It is beaten with the side drum sticks, and used to imitate step dancing or the galloping of horses.

THE CYMBALS

The Cymbals are circular plates of an alloy of metals, of which the principal constituent is brass. They are of varying sizes, from 6 in. to 18 in. in diameter.

The 14 in. to 16 in. size are those usually found in the Military Band. These plates are not flat, as there is a cup-shaped depression in the centre containing a hole, through which is placed the hand strap. Only the edges of the two Cymbals meet when clashed together.

The various methods of playing the cymbals are :—

- (a) As for marching purposes, the two Cymbals clashed together.
- (b) By one plate being held in the left hand by its strap or being suspended from a stand and struck with a drum or timpani stick.
- (c) Held as in (b), but played with the side drum sticks rolling on the plate similarly to a Side Drum.
- (d) The double plate roll by continual motion of the edge of one Cymbal being vibrated against the edge of another (this method is not widely used) and is not so effective as (c).

The abbreviation " cym. " is the usual form of writing.

The Cymbal is used for precisely the same effects in the Military Band as in the Orchestra, but it is apt to be overdone by some arrangers. It should be reserved for the pinnacle of a *crescendo* and sudden *sf* full band chords, when the best effect is obtained by hitting a suspended Cymbal with a timpani-stick. In the following example Von Blon has used a Cymbal roll with delightful effect. The roll is obtained with the side-drum sticks :—

“ Blumengefluster ”

Von Blon

The musical score is for the piece "Blumengefluster" by Von Blon. It is written for Percussion and Band. The Percussion part includes a Triangle and a Cymbal with stick. The Band part includes Clts. (Cymbals). The tempo is marked Allegro. The score shows a Cymbal roll with a 6-measure pattern and a 6-measure pattern with a 6-measure pattern. The score is in 2/4 time and has a key signature of one flat.

By permission of Messrs. Ruhle & Wendling

THE VIBRAPHONE

The Vibraphone is the most modern of all percussion instruments. It was first introduced into the Dance Orchestra, and later found its way into the Military Band.

It is exactly the same as the Glockenspiel, except that it has revolving discs in the resonators, which are set in motion by an electric or clockwork motor.

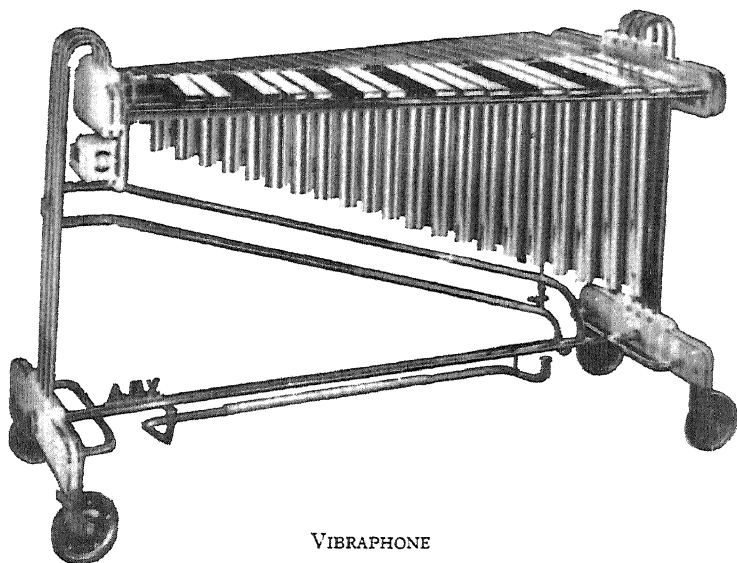
These revolving discs set up a wave, and give a *vibrato* effect similar to the tremulant stop on the Organ, which is produced in much the same manner.

It is this *vibrato* that gives it the power to sustain notes, which is not possible on the Glockenspiel or Xylophone unless the performer "rolls," as on the Side Drum.

Advantage is taken of its power to sustain by allotting chords to it, which are produced by the performer using two or more sticks in each hand, thereby enabling him to hit three or more notes simultaneously. In high reed passages the Vibraphone can play chords in this manner with beautiful effect.

Slow sustained passages in two or three part harmony show the instrument to advantage, but in quick passages one note is apt to run into another, as they would on the Piano if there was no damper attachment.

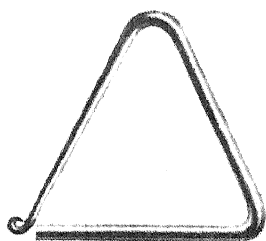
PLATE XXXVI.



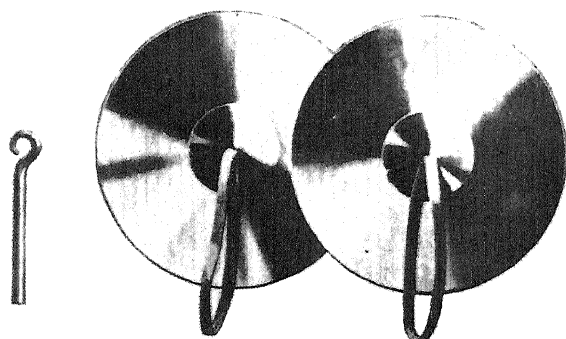
VIBRAPHONE



CASTANETS



TRIANGLE AND BEATER



CYMBALS

Being such a modern instrument no extracts can be taken from Military Band arrangements to show its use.

The following extract, however, will show how the author has used it with effect in Lalo's Overture "Le Roi d'Ys."

The musical score is for Lalo's Overture "Le Roi d'Ys". It is marked "Andante". The score includes parts for Vibraphone, Solo Cornet, Band (Clt.s., Euph., Bsns in Gves, Clt. etc.), and Euph. & Bass. The Dulcitone part is written in the upper staff, featuring a melodic line with a crescendo and a final flourish.

Publié avec l'autorisation de M. Heugel, Editeur-propriétaire, 2 Bis. Rue Vivienne, a Paris.

THE DULCITONE

The Dulcitone is a small keyboard instrument, the tone being produced from a graduated rank of small steel tuning forks, which are struck with hammers. Owing to the resonance of these tuning forks, dampers are necessary. These are controlled by a pedal.

The compass varies according to the different makes, but the following is the size most frequently used :—

The musical notation shows the compass of the Dulcitone. It consists of a single staff with a treble clef and a key signature of one sharp (F#). The notation shows a single note on the first line (F#) and a whole rest on the second line (C). Above the staff, the text "one higher" is written, indicating that the notes are to be played one octave higher than written.

The tone of the Dulcitone is sweet and bell-like, and possesses a good sustaining power, even at the top of its compass. It is written for on double staves, like the Pianoforte, either at actual pitch or an octave above.

It has not yet been introduced into the Military Band. as it is totally unsuited to outdoor performances.

THE ANVIL

Anvils in the strict sense of the word are not used in the Military Band, but are substituted by two small bars of steel, about $\frac{3}{4}$ in. thick and 2 in. wide, which are known as the large and small Anvils.

These are mounted on a wooden frame and struck with a small hammer. No note of definite pitch is obtained, but the effect of an interval of a fifth is heard between the small and large bar. If notes of actual pitch are essential it would be far better to write the passage for the Tubaphone.

The following examples from typical Military Band descriptive music illustrates the use of the Anvil. From these it will be seen that the rhythm to be played is written on any note, and in either clef :—

Musical Idyll, " The Smithy in the Wood " Th. Michaelis

Suite, " The Dwellers in the Western World " J. P. Sousa

By permission of Messrs. Chappell & Co., Ltd., and The John Church Company.

THE CELESTA

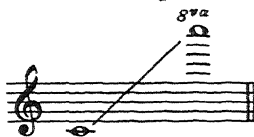
The Celesta bears a great resemblance to the Pianoforte. It was invented by Mustel, and claims the distinction of being the first instrument to possess resonators.

It consists of a series of small steel bars which are set in vibration by hammers controlled from a pianoforte keyboard. Its tone is sweet and clear and owes its peculiarity to the accurately tuned resonators that are fixed behind each steel bar.

From the above description one would expect the tone of the Celesta to be somewhat similar to that of the Vibraphone. If the Vibraphone is played without the tremulant there is a striking resemblance.

It is written for on two bracketed staves like the Pianoforte, but an octave lower than its actual pitch. This, as in the case of the Xylophone, Glockenspiel and Tubophone, is to save confusion of ledger lines.

The modern instrument has a compass of four octaves from :—



Tschaikowsky has written a beautiful passage for the Celesta in the "Casse Noisette" Suite. The following is a short extract :—

"Danse de la Fée Dragée" Tschaikowsky

Andante non troppo

Bass Clarinet

Celesta

The musical score shows a Bass Clarinet part and a Celesta part. The Celesta part features a series of chords and single notes, with dynamics markings *mf* and *fp*, and a *etc.* marking.

THE WIND MACHINE

The Wind Machine is a barrel-shaped device which is used to imitate the wind. The barrel is revolved by a handle, and the effect of a high or low wind is obtained according to the speed at which it is turned.

There is a small space between each stave of the barrel, and the sound is produced by each stave in turn coming into contact with the band of silk, which is held securely round it as it revolves.

Very few Military Bands possess a Wind Machine, effects of this nature being obtained by the Siren, which will give quite a good imitation.

THE RATTLE

The rattle is one of the many accessories that the drummer of the Military Band is called upon to produce. It consists of a wooden cog-wheel which is revolved against a strong spring of wood or metal. As the cog is revolved each tooth in turn releases the spring on to the next tooth, and so sets up a series of sharp reports. In the following extract it is used with good effect :—

Suite "Dwellers in the Western World" J. P. Sousa

Allegro molto strepitoso

Rattle

Band

The musical score shows a Rattle part and a Band part. The Rattle part features a series of sharp reports, with dynamics markings *p* and *etc.*. The Band part features a series of chords and single notes, with dynamics markings *p* and *accel.*.

By permission of Messrs. Chappell & Co., Ltd., and the John Church Company.

PART II Arranging for the Military Band

The arranger is called upon to make an arrangement from either of the following :—

(A) Orchestra (large or small)	.. ..	page 224
(B) Pianoforte	.. ..	„ 252
(C) Organ	.. ..	„ 278
(D) Voice and Accompaniment	.. ..	„ 288

The following points must be studied by the arranger before the arrangement is made :—

- (1) To reproduce on the Military Band as nearly as possible the composer's intentions as originally written, keeping closely to the original instrumentation.
- (2) By changing the instrumentation to produce a better effect on the new medium.
- (3) The best key for the arrangement.

GENERAL REMARKS AND HINTS ON ARRANGING FOR THE MILITARY BAND

In arranging a composition for Orchestra to the Military Band combination it is quite possible that the student will prefer the corresponding relative changes of tone colour, etc., but obviously, if arranging from the Pianoforte it would not be desirable that the arrangement should sound like a Piano, as it would be too thin in effect.

A table showing the relationship between the Orchestra and the Military Band is given.

It is necessary to remind the student here that the Clarinets are to the Military Band what the Violins are to the Orchestra :—

<i>Orchestra.</i>	<i>Military Band.</i>
Leading Violin	Solo Clarinets, assisted when necessary by the E \flat Clarinet and Flute.
1st Violins	Repiano Clarinet.
2nd Violins	2nd Clarinets.
Viola	3rd Clarinets and E \flat Alto Saxophone.
'Cello	The Euphonium or Bassoon, and occasionally the B \flat Tenor Saxophone.
String Basses	Basses.
Flute and Piccolo	Flute and Piccolo.
Oboe and Cor Anglais	Oboe and Cor Anglais.
Clarinets	Cornets.

Bass Clarinet	..	..	Bassoon.
Bassoon	..	..	Bassoon.
1st and 2nd Horns	..	..	Horns.
3rd and 4th Horns	..	..	Trombones, Bassoon or Saxophone.
Trumpets	..	..	Divisi Cornets.
Trombones	..	..	Trombones.
Tuba	..	..	Basses.
Percussion	..	..	Percussion.

The preceding table is adopted on the basis of a band of 25 performers and is the basis suggested for all arranging.

Examples of scoring for each individual instrument are now shown. The student is strongly advised to study the particular accompaniment, tremolos, grouping and various technical details of good arranging.

Distribution of Chords, Etc. (Compare page 222.)

(A) The distribution of the chord of B \flat for Full Band, "ff."

(A1) The distribution of the chord of B \flat for Full Band, "pp."

(B) Woodwind.

(C) Brass.

(D) High Reed effect.

(E) Middle Harmonic effect for Clarinets, Horns, Saxophones and Bassoon.

(F) Middle Harmonic effect for Brass.—Horns, Cornets, Trombones.

The most important points arising when arranging for Military Bands are :—

(a) A personal knowledge of the possibilities of the instruments.

(b) Balance of tone colour

The first of these two points (a) has already been discussed at great length, and a careful and diligent study of Part I should make this an easy matter. The student is, however, urged to handle the various instruments personally. An ounce of practical knowledge is worth a ton of theory.

The second point (b), however, is most important. Good conductors and good instrumentalists have had their renderings spoilt by the poor balance of the band.

Before attempting to arrange even a common chord for a combination, the balance must be planned and considered. The size of the combination in no way alters this ; whether it be for a band of 10 or a band of 60, the balance must be considered carefully.

Whatever the work in hand, for full orchestra, small orchestra, piano, two or three pianos, organ or voices, the above must be taken into consideration.

The harmonies, however elaborated or extended, can always be boiled down to four-part harmony.

Carefully note the chords and the various resolutions and distribute them evenly amongst the various groups (as shown on page 224.)

Be sure that the triads are well balanced. The following distribution is obviously bad :—

Concert Flute.

E \flat Clarinet.

Oboe.

Solo B \flat Clarinet.

Rep. B \flat Clarinet.

2nd B \flat Clarinet.

3rd B \flat Clarinet.

E \flat Alto Saxophone.

B \flat Tenor Saxophone.

Bassoon.



There is no balance in the above chord :—7 notes on the tonic, against two-fifths and one-third.

This example is given to illustrate the bad points of poor arrangements, which already exist in many publications for Military Band.

As Military Bands are occasionally needed in various sizes, and numbers, from 8 to 50 performers or massed bands to any number, an officially approved list is given here :—

Instrumentation of Military Bands of 20 to 50 Players.

Number of Performers	20	25	30	35	40	45	50	60	75	90
*Piccolo	I	I	I	I	I	I	I	2	2	—
*Flute	—	—	—	—	I	I	I	—	—	—
E♭ Clarinet	I	I	I	I	I	2	2	2	2	—
Oboe	I	I	I	I	I	2	2	2	2	—
Solo B♭ Clarinet ..	2	2	3	4	4	4	6	6	6	—
1st	I	I	2	2	2	3	3	4	4	—
2nd	I	2	2	2	3	3	4	4	4	—
3rd	I	2	2	2	3	3	4	4	4	—
Soprano	—	—	—	—	—	—	—	—	—	—
Alto Saxophone ..	—	I	I	I	I	I	I	2	2	—
Tenor	—	I	I	I	I	I	I	2	2	—
Baritone	—	—	—	—	—	—	—	—	I	—
Bassoon	I	I	2	2	2	2	2	4	2	—
Horn (1st and 2nd)	2	2	2	2	2	2	2	4	4	—
„ (3rd and 4th)	—	—	—	2	2	2	2	—	—	—
1st B♭ Cornet ..	2	2	2	3	4	3	3	4	5	—
2nd	I	I	I	2	2	2	2	2	2	—
B♭ Trumpet	—	—	—	—	—	2	2	—	—	—
1st Tenor Trombone	I	I	I	I	I	I	I	2	2	—
2nd	I	I	I	I	I	I	I	2	2	—
Bass	—	I	I	I	I	I	I	2	2	—
Euphonium	I	I	I	I	I	I	2	2	2	—
E♭ Bombardon ..	I	I	2	2	2	2	†3	4	4	—
B♭	I	I	I	I	†2	†2	2	2	2	—
Side Drum and effects	—	I	I	I	I	I	I	2	2	—
Bass Drum, Timpani and Cymbals	I		I	I	I	I	I	2	2	—

* In bands of 20, 25, 30 and 35 the same performer plays either Flute or Piccolo according to the requirements of the music, which is scored so that they shall not be played simultaneously.

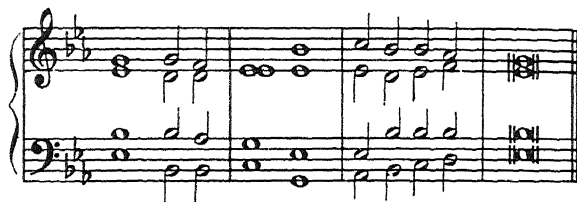
† The addition of a String Bass would be preferred to that of a brass.

It will be noticed in the following that the balance is very strongly considered.

Band of 8 performers. $\left\{ \begin{array}{l} T = \text{Treble.} \\ A = \text{Alto.} \\ t = \text{Tenor.} \\ B = \text{Bass.} \end{array} \right.$

The first four bars of a well-known hymn will be treated as a guide.
Hymn No. 27, A. and M., "Abide with Me"

Piano
or
Organ.



One 1st B \flat Clarinet. T *goe higher*

One 2nd B \flat Clarinet. A

One 3rd B \flat Clarinet. t

One 1st Bassoon. B

Two 1st and 2nd Horns in F. A
t

One 1st B \flat Cornet. T

One E \flat Bass. B

The above band of 8 performers is the smallest that is likely to be called for. It is known as the small church band.

POCKET HINTS ON ARRANGING

Always have sustained chords in an arrangement where some instruments have an *arpeggio* or similar moving passage.

Do not score too thickly.

Write parts plainly.

Cues.—These are important, especially after long rests; they give the signal to the performers.

In writing tremolos  etc., where possible confine

to B \flat Clarinet and Bassoon.

In scoring, be obvious, avoid anything in the nature of experiments.

Avoid double accidentals and write the enharmonic note. The following is an example where this procedure could have been adopted with advantage.

“ Unfinished Symphony ”

Schubert



The musical score is for the 'Unfinished Symphony' by Schubert, marked 'Andantino'. It shows parts for Cornets, Bass Tromb. & Euph., and Clt. (Clarinet). The score includes dynamic markings like *ppp* and *pppp*. The notation shows various musical symbols including notes, rests, and accidentals.

Remember the bad and weak notes and registers of instruments. If in doubt turn back to Part I.

Low Harmonies. This is one of the bugbears of arranging for Military Bands. If the nature of the work calls for a low 3rd or 5th



or



it is extremely advisable to write the upper of the two notes “*pp*” or “*p*” if possible, giving it to the Bassoon.

Bassoon.



Basses.



NEVER employ a brass instrument on a low harmony except for a peculiar effect, such as an Eastern effect, etc. The result from a musical point of view is crude and muddy.

Use the Saxophones to strengthen the weak register of the Clarinets.

Pay strict attention to the piano pedal when arranging from pianoforte music. Experiment with a pianoforte pedal if you do not understand the significance of it.

Study the metronome and tempo marks before attempting to make an arrangement.

Before commencing your score look ahead ; study the work and plan the whole throughout. Do not rush headlong into the arrangement and then later in the work find that you have employed all your resources. Save your forces for definite effect.

REMEMBER that your 2nd Cornet with the three Trombones forms a good quartette for sustained work.

NEVER write harmony notes below the bass, irrespective of how the pianoforte reads. If the bass proceeds in octaves DON'T have any harmony note between the octaves.

Use your basses freely on the low register and often in octaves. Definitely establish the actual tones of the very low notes. Avoid using basses high up, except when a "solo" or important passage calls for it.

"*Pizzicato*" should always be marked "*Staccato*."

Use the Saxophones for strengthening the inner harmonies.

Remember you are writing for a band of 25 performers.

Be careful about the use of the Euphonium. Do not use it for alto or tenor parts ; keep it for the higher bass or counter subjects and *bravura* effects.

When any woodwind instrument is playing a solo the accompaniment must be very light.

When an instrument is given a solo in an arrangement, if possible give an accompaniment of a different colour.

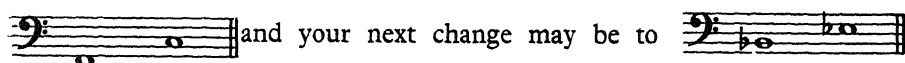
String tremolos can be imitated by sustaining the reeds with the side drum (muted) rolling. This is on the whole better than the everlasting reiteration of syncopation. Tremolos sometimes have the desired effect, but are best in the "chalumeau" register, and even then are not always workable.

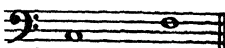
Although the above is what one might term "faking," it is on the whole the most effective (see p. 237.)

Avoid making weak modulations to get from one movement to another. It is much better to bring the movement to a close and start afresh in the new key. The modern ear is quite used to it. This was a great weakness with the old arrangers.

Remember that all performers on wind instruments must breathe, therefore allow for this.

Timpani.—Be careful how you plan these. Say you have them in



it will be better to make the first tuning 

When writing a melody in octaves it is advisable to put some inner harmonies in between the two octaves; this avoids a weak and empty effect.

Be careful of choice of key. Select that which gives every instrument a chance of executing the passages with the utmost facility. Many arrangements are marred by being in the wrong key. Often an orchestral piece is in A Major; this is better transposed up or down a semitone.

When arranging from a orchestral score try to imitate the sound of the Orchestra; but when arranging from the Pianoforte it is quite a different matter, because you have a free hand to make a good sounding combination and colour according to taste, preserving the spirit of the composition. By no means try to imitate the sound of the Pianoforte.

The student will find in Section B, page 252. several pianoforte extracts and the arrangements for Military Band. It is again suggested that the student arrange the fragments and compare the results.

Remember the double notes of Violins, etc., must be given to another instrument.

Acquaint yourself with all the possible *glissando* passages of the Trombone. These are very much in use nowadays.

In “*pp*” passages flutter tonguing on the Clarinets is an admirable substitute for reiterated movement of the violin bow, and is to be preferred to syncopation or repeated notes in rhythm. In “*ff*” passages, however, flutter tonguing is not so effective, and is not recommended.

Be careful of the high notes of the E \flat Clarinet (*see* Part I), as they are seldom in exact accordance with the pitch of the flute and often “*pianissimo*” effects high up on these instruments are far from satisfactory.

Due regard must be paid to the “dummy” register (or “break”) of the Clarinets.

Look out for the common “trap” of writing impossible shifts for the Trombones (*see* Part I).

Endeavour to grasp the composer’s ideas.

Various arrangements from the Orchestra, Pianoforte, Organ and Voice, for the Military Band, for study and analysis, will now follow in their respective sections.

SECTION A

Examples of Arrangements for Military Band from the Orchestra.

Illustrating “*pp*” use of woodwind. A very effective passage.

Overture “Egmont”

Beethoven

This musical score is for the first system of the Overture "Egmont" by Beethoven. It features a key signature of three flats (B-flat, E-flat, A-flat) and a 2/4 time signature. The tempo marking is "Sostenuto". The score is arranged for a military band and includes the following parts: Flute (Fl.), Eb Clarinet (Eb Clt.), Bb Clarinet (Bb Clts.), Saxophone (Saxes), Bassoon (Bsn.), and Brass. The woodwind parts are marked with a piano (pp) dynamic. The brass part is marked with a forte (f) dynamic. The score includes various musical notations such as slurs, ties, and dynamic markings. The word "etc." appears at the end of the system.

This musical score is for the second system of the Overture "Egmont" by Beethoven. It continues the key signature of three flats and the 2/4 time signature. The tempo marking is "Sostenuto". The score includes the following parts: Piccolo (Picc.), Clarinet (Clt.), Bassoon (Bsn.), Horns (Hns.), Trombones (Trombs sustained), and Basses. The woodwind parts are marked with a piano (pp) dynamic. The brass parts are marked with a forte (f) dynamic. The score includes various musical notations such as slurs, ties, and dynamic markings. The word "etc." appears at the end of the system.

A delicate accompaniment to Piccolo and Flute. Note the good balance.

Ballet Music "Hiawatha"

Coleridge-Taylor

Allegro leggiero (♩ = 72)

Picc. *mp* *f* etc.

Flute etc.

Oboes *p*

2nd Clt. *p*

3rd Clt. *mf*

Alt. Sax. & Bsn. *mf*

Triangle etc.

Hns. etc.

Example of delicate accompaniment to E♭ Clarinet Solo.

"Suite Algerienne"

Saint-Saens

Andantino (♩ = 54)

E♭ Clarinet Solo *p* etc.

1st, 2nd & 3rd Clts. *p* etc.

Hns. *p* etc.

Basses *p* etc.

By permission of Messrs. Durand & Co., Paris.

Example of E♭ Clarinet Solo with Horn accompaniment and the Euphonium as bass. Giving an exceedingly delicate and refined accompaniment to an individual solo instrument.

Selection from "Cavalleria Rusticana"

Mascagni

Andante

E♭ Clarinet Solo *p* etc.

Hns. *pp* etc.

Euph. *pp* etc.

By permission of Messrs. Ascherberg, Hopwood & Crew, Ltd

An exceedingly effective use of the Flute and E \flat Clarinet in tremolo over sustained Clarinets and Horns, with the Oboe taking the original oboe part from the orchestral score. Flute and E \flat Clarinets take the original violin parts.

"Forest murmurs" from "Siegfried"

Wagner

Moderato (♩ = 76)

Oboe Solo

Fl. E \flat Clt.

B \flat Clts.

Horns.

pp

etc.

(A) An example of injudicious arranging. As this figure continues for so many bars it becomes extremely tiring to the performers, consequently the performance becomes scrappy and indifferent.

Overture "Tannhäuser"

Wagner

Allegro

Solo & Rep. Clts.

2nd Clt.

3rd Clt.

etc.

(B)

Allegro (♩. = 116)

Fl. & Eb Clt.
Solo & 1st Clt.
2nd Clt. 3rd Clt. 2nd Clt. 3rd Clt.
etc.
p
p₄

(C)

Allegro (♩. = 116)

Solo & 1st Clts.
2nd & 3rd Clts.
Bsn.
Bass
add Fl. & Eb Clt.
Clt.s. only

The above extracts by permission of Messrs. Durand, Paris.

Example of *legato* Oboe solo with woodwind accompaniment. An effective example of woodwind tone colour, which is later followed on exactly the same lines by the brass section.

Overture "In Memoriam"

Sullivan

Andante religioso

Oboe
Clarinet
Bassoon
mf
mf
mf

Typical recurring *arpeggio* passage for woodwind, as transferred from the strings, with sustained brass effect to bind it together. Without this binding effect it would be exceedingly thin.

Entry of the Gods into Vahalla
from
"The Rhinegold"

Wagner

Andante maestoso ♩ = 60

Illustrating light accompaniment to Saxophone. Note the low harmony used and the thin scoring, which does not overpower the Saxophone.

Selection from "Siegfried"

Wagner

Moderato ♩ = 76

Alt. Sax. (Solo)

Saxophone actually playing a 6th higher.

Illustrating tremolo accompaniment of woodwind to Tenor Saxophone solo, quite effective arranging and easy to play.

Selection from "Siegfried"

Wagner

Saxophone actually playing a 9th higher.

Moderato ♩ = 76

Ten. Sax. Solo

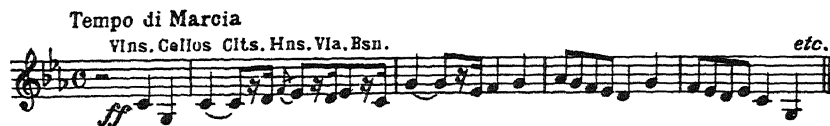
etc.

A big unison passage at the opening of the suite. A very full and sonorous effect.

Suite No. 1, "L'Arlesienne"

Bizet

(Orchestra)



(Military Band)



Effective tremolo accompaniment underneath Horn solo.
N.B.—The accompaniment is not heavy.

Overture "Der Freischutz"

Weber

(Orchestra)

Adagio
Hns. in C etc.

pp
Violins
Viola
pp
Cello
pp
Bass

Adagio

(Military Band)

p Hns
legato
pp Cits
Sax. Euph. Bsn.
ppp

etc.

The use of Solo Horn both open and closed.

"Capriccio Espagnole"

Rimsky-Korsakov

Poco meno mosso ♩ = 88 (Orchestra)

p Cor Anglais
Horn
pp Violins
pp Viola
pp Cello
pp Bass
pp

open closed

etc.

Poco meno mosso ♩ = 88 (Military Band)

p Oboe Solo
Horn Solo
p Cits.
Bsn.
p

open closed

etc.

Bass 8ve lower

Side Drum rolling (muted)

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(A) Example of Divisi Cornets. One playing the Trumpet part, one playing 1st Cornet, one playing 2nd Cornet, accompanied by the 1st Tenor Trombone to complete the brass quartette.

(B) Example of scoring an *arpeggio*. Notice the taking up from the various instruments.

Suite Symphonique

“Scheherazade”

Rimsky-Korsakov

Example A

Example B

Above excerpts by permission of Editions M.P. Belaieff

(C) An example of Bassoon melody with Orchestral accompaniment of four Basses divisi.

In the Military Band arrangement of this passage it will be noticed that the Bassoon melody is doubled in the Saxophones as it is too weak alone, and the accompaniment is transferred to three Trombones and Bass.

Note the more suitable key for Military Band.

(D) Another treatment of the same melody in a later stage of the work. Here the Oboe is doubled with the Flute and E \flat Clarinet in the Military Band arrangement, while the E \flat Clarinets are playing the accompaniment.

Example C (Orchestra)

Andantino (♩ = 112)

Bassoon Solo *p*

Contra- I
-bass II *pp*

Contra-
-bass III *pp*

IV *pp*

etc.

Example C (Military Band)

Andantino (♩ = 112)

Saxophone & Bassoon *ppp*

1st Tromb. *ppp*

2nd Tromb. *ppp*

Bass Tromb. *ppp*

Basses *ppp*

etc.

Example D (Orchestra)

Andantino (♩ = 112)

Oboe Solo *p*

Flute *pp*

Hns. I & II *pp*

Harp *pp*

etc.

Example D (Military Band)

Andantino (♩ = 112)

Flute Oboe Eb Clt. *p*

B♭ Clts. *pp*

etc.

Above excerpts by permission of Editions M.P. Belaieff

Two examples of band accompaniment to Trombone solo :—

(A) Solo *bravura* playing with woodwind tremolo accompaniment.
Extremely effective.

(B) Solo *legato* playing. All reeds in *arpeggio*.

Trombone solo. Aria "Lend Me your Aid "

Gounod

Example A

Maestoso (♩ = 60)

Solo Tromb.

Reeds Tremolo

Full Band

Basses & Euph.

Basses etc.

etc.

etc.

Example B

Andante moderato (♩ = 54)

legato

All Cits on arpeggio

Full Band

Hns. & Saxes

Basses

etc.

etc.

An excellent example of Trombone writing. Here the noble qualities of the instrument are displayed to the fullest advantage.

Finale "5th Symphony "

Beethoven

Allegro (♩ = 84)

E♭ Cit. Oboe

Cits.

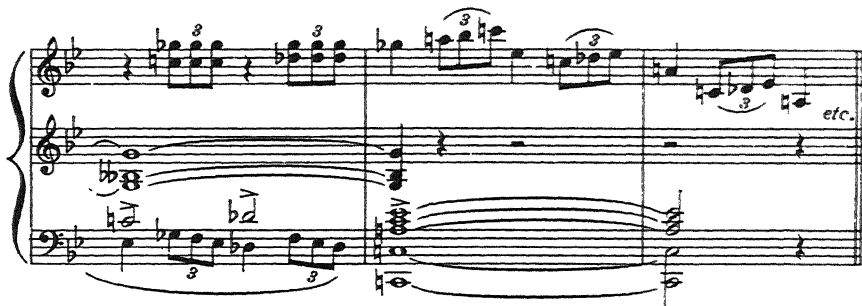
Hns.

Brass

Tromb.

Euph.

Bass



Examples of Euphonium solo of the aria type with woodwind accompaniment and sustained harmony. It will be observed that in practically all moving figures of accompaniments it is necessary to have some sustained harmony to add body, otherwise the effect is invariably thin and empty.

Selection from "Il Trovatore"

Verdi

(Orchestra)



(Military Band)



Bass passage of the *legato* type. Note the Euphonium and Bassoon and the bass in octaves.

Overture to "Rienzi"

Wagner

Molto sostenuto e maestoso



Effective example of brass instruments against woodwind high pedal.

Overture "Merry Wives of Windsor"
(Orchestra)

Nicolai

Andante moderato $\text{♩} = 72$
1st Vins. con sord.

2nd Vins. con sord.

Cellos & Basses

Timp.

Vins. & Cellos

Bass

etc.

(Military Band)

Andante moderato $\text{♩} = 72$

pp

Clts in gves

Bsn. Bass

Bsn. Euph.

Bass Tromb.

pp

Bass

etc.

pp dolce

(A) Examples of scoring simple little melodies with ordinary after-beat accompaniment.

"Melody in F"

Rubinstein

Moderato
Cornet Solo or Hn. & Eb Alto Sax.

Fl. Eb Clt.

Clts.

2nd & 3rd Clts.

Basses

Oboe

Sax

etc.

(B) Scoring of rising *arpeggio*.

Moderato

Fl. Eb & Bb Cts.

Cornet

Sax.

Oboe

Euph.

Basses

The next example shows the good use of Reeds and Horns for an effective organ movement such as this.

Here, it will be noticed, the parts are not doubled, as the instrumentation used is strong enough.

Suite "L'Arlesienne"
(Orchestra)

Bizet

Adagio (♩ = 40)

Vlins.

Cello

Vla.

etc.

(Military Band)

Adagio (♩ = 40)

Cts. & Hns

Sax.

Bsn.

pp

espressivo

etc.

Effective scoring of rapid scalar passages in unison ; note the entries of the various instruments.

“ Capriccio Espagnole ”

Rimsky-Korsakov

(Orchestra)

Vivo (♩ = 141)

Fl.

Ob.

Cl. in A

Vio. I

Vio. II

Vla.

Cello

Bass

(Military Band)

Vivo (♩ = 140)

Flts. & Clts.

Alt. Sax.

Tenor Sax.

Cornet

Bsns

Euph

Basses

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Illustrating the employment of Tubular Bells.

Selection from "Cavalleria Rusticana"
(Orchestra)

Mascagni

Allegro giocoso (♩ = 176)

Tutti
ff
Bells
Basses

Allegro giocoso (♩ = 176)

Tubular Bells
ff
etc.

The above extracts by permission of Messrs. Ascherberg, Hopwood & Crew, Ltd.

Selection from "Pagliacci"

Leoncavallo

Andantino grazioso (♩ = 116) (Orchestra)

Andantino grazioso (♩ = 116)

Tubular Bells
p
Vin. & Fl.
Voices
Cello & Bass
Ding Dong
Ding Dong
Ding Dong
Dong

(Military Band)

Andantino grazioso (♩ = 116)

Andantino grazioso (♩ = 116)

Tubular Bells
p
Clts.
Trombs.
Euph & Bass
Fl. & E♭ Clt.

Five examples from
 "Christmas Overture" Coleridge-Taylor
 (Example A—Orchestra)

Moderato

Strgs. pizz.

Trpt.

Brass

etc.

(Example A—Military Band)

Moderato

1st Cornet

Reed staccato

Brass

Bell

Timp.

(B) A fine example of transferring harp passages in the orchestra to the Euphonium and Bassoon, then to the Solo Clarinets. Very effective scoring and strongly recommended.

(Example B—Orchestra)

Allargando

Strings

Harp

etc.

(Example B—Military Band)

Allargando

Clt.s. *dim.* *mf*

Trombs.

Euph. & Bsn.

Basses

Solo Clt.

7

(C) The Solo Clarinet taking the 1st violin melody with the remainder of the Clarinets in the Military Band playing the woodwind part in the Orchestra.

(Example C—Orchestra)

Moderato

Vins. *mf* *etc.*

W.W. *mf*

Brass *mf*

etc.

(Example C—Military Band)

Moderato

Solo Clt. *mf* *cresc. etc.*

2nd Clt.

3rd Clt.

Hns. *mf*

Euph. *mf*

(D) Flute and Eb Clarinet in the Military Band—taking the string parts—the Solo and Repiano Clarinets playing the harp passage.

(Example D—Orchestra)

Tranquillo

Strgs. *mf* *etc.*

W.W. *mf*

Harp *mf*

etc.

Harp

(Example D—Military Band)

Tranquillo

Fl. & Eb Clt.
P Cornet.
Hns.
1st Tromb.
Solo & 1st Bb Clts.
Clt.s. etc.

(E) String tremolos transferred to the Clarinets in the Military Band.

(Example E—Orchestra)

Moderato

Strgs.
W.W.
Harp
Trpts.
Brass in gves
etc.

(Example E—Military Band)

Moderato

Clt.s.
Cornets
Hns.
Cym.
Trombs.
etc.

The following passages are taken from Beethoven's 7th Symphony and arranged for Military Band.

In the first example it will be noticed how the Side-Drum is helping the 2nd and 3rd Clarinets and Saxophones to reproduce the semiquaver figure of the strings.

Example A
(Orchestra)

Vivace (♩. = 104)

This musical score is for an orchestra, marked 'Vivace' with a tempo of 104 beats per minute. It features a key signature of one sharp (F#) and a 2/4 time signature. The score includes staves for Flute and Clarinet (Fl. & Clt.), Banjo (Ban.), 1st Violins (1st Vins.), 2nd Violins (2nd Vins.), Viola (Vla.), Cello and Bass (Cello & Bass), Horns (Hns.), and Timpani (Timp). The woodwinds and strings play a melodic line with dynamic markings of *pp*, *cresc.*, *ff*, and *sf*. The strings play a semiquaver figure. The timpani part is marked 'Timp in E & A' and plays a rhythmic pattern. The score ends with 'etc.'.

Example A
(Military Band)

This musical score is for a military band, marked 'Vivace' with a tempo of 104 beats per minute. It features a key signature of one sharp (F#) and a 2/4 time signature. The score includes staves for Flute and Eb Clarinet (Fl. & Eb Clt.), 1st Cornet (1st. Cornet), 1st Trombone (1st Tromb.), Solo and Repetition Clarinet (Solo & Rep. Clt.), 2nd and 3rd Clarinets (2nd & 3rd Clts.), Basses, Saxophones (Saxes.), Bassoon and Euphonium (Bsn. Euph.), Side Drum, and Bass Drum. The woodwinds and strings play a melodic line with dynamic markings of *pp*, *cresc.*, *ff*, and *sf*. The strings play a semiquaver figure. The side drum and bass drum parts are marked 'Side Drum' and 'Bass Drum' and play a rhythmic pattern. The score ends with 'etc.'.

In this example study carefully the arrangement of the reiterated semiquavers of the strings, and pick out each individual instrumental part from the orchestral score. Particular attention should be given to the manner in which the *crescendo* is built up and to the entry of the brass at the climax. Had the brass helped in the *crescendo* the effect at the climax would have been lost.

Example B

(Orchestra)

Vivace ♩ = 104

The musical score is arranged in three systems, each with five staves. The first system includes the 1st Violin, 2nd Violin & Viola, and Cello & Bass. The second system includes Oboe, Flute, Bassoon, and Clarinet. The third system includes Oboe, Flute, and continues the string parts. The score begins with a tempo marking of 'Vivace' and a metronome marking of '♩ = 104'. The key signature has two sharps (F# and C#). The first system shows the strings starting with a *pp* (pianissimo) dynamic, playing a pattern of reiterated semiquavers. The second system shows the woodwinds (Oboe, Flute, Bassoon, Clarinet) entering with a *cresc.* (crescendo) marking. The third system shows the strings continuing their semiquaver pattern, with the woodwinds (Oboe, Flute) also marked with *cresc.*. The score concludes with a *ff* (fortissimo) dynamic marking and the word 'etc.' (et cetera).

1st Vln. *pp*

2nd Vln. & Vla. *pp*

Cello & Bass *pp*

Oboe *cresc.*

Fl. *cresc.*

Bsn. *p cresc.*

Clts. *cresc.*

cresc. poco a poco

cresc. poco a poco

Oboe

Fl. *cresc.*

etc.

cresc.

cresc.

cresc.

ff

Example B
(Military Band)

Vivace ♩ = 104 Fl.

Solo & Rep Clts.
pp

2nd & 3rd Clts. & Hns.
ppp

Basses & Euph.
pp

Side Drum

add Oboe & Eb Clt.
cresc. poco a poco

cresc. poco a poco
add Saxes

add Fl.

add Cornets

add Trombs. Hns.

This musical score is for a military band piece titled 'Example B'. It is in 2/4 time, marked 'Vivace' with a tempo of 104 beats per minute. The key signature has one flat (B-flat). The score is divided into three systems. The first system includes staves for Flute (Fl.), Solo and Repetition Clarinets (Clts.), 2nd and 3rd Clarinets and Horns (Clts. & Hns.), Basses and Euphonium (Basses & Euph.), and Side Drum. The second system adds Oboe and E-flat Clarinet (Oboe & Eb Clt.) and Saxes. The third system adds Flute (Fl.), Cornets, and Trombones and Horns (Trombs. Hns.). Dynamics include *pp* (pianissimo), *ppp* (pianississimo), and *cresc. poco a poco* (crescendo little by little). The score ends with a double bar line.

An example is now shown of a typical arrangement of a March score which usually presents great difficulties to students of the Military Band.

(A) Illustrating the opening of a march. Full band “*ff.*”

(B) The first subject of the march. The band "*pp.*" Notice the counter-melody in small notes.

March " Staffordshire Knot "

Duthoit

(A)

(♩ = 120)

Piccolo

Fl.

E♭ Clar.

Ob.

Solo B♭ Clar.

Rep. B♭ Clar.

2nd B♭ Clar.

3rd B♭ Clar.

E♭ Alt. Sax.

B♭ Ten. Sax.

Bsn.

1st & 2nd Hns.
in F

1st B♭ Corn.

2nd B♭ Corn.

1st Ten. Trom.

2nd Ten. Trom.

Bass Trom.

Euph.

Basses

Drums, etc.

(B)

(C) The scoring of the bass solo. Note the instruments employed on the bass theme, also the form of accompaniment.

(D) The Trio of the march: A smooth *legato* melody in the Saxophones, Bassoon and Cornets and Euphonium, with a counter-melody second time played by the higher reed (this is marked in small notes.)

(C)

(D)

Section (C) is a musical score for a bass solo. It features a large ensemble of instruments, including multiple strings, woodwinds, and brass. The score is written in a key with two flats and a 4/4 time signature. The bass line is prominent, with many notes marked *ff* (fortissimo). The accompaniment consists of various instruments playing rhythmic patterns and chords.

Section (D) is a musical score for the Trio of the march. It features a smooth *legato* melody in the Saxophones, Bassoon and Cornets and Euphonium. The score is written in a key with two flats and a 4/4 time signature. The melody is marked *pp* (pianissimo). A counter-melody is played by the higher reed (marked in small notes) during the second time. The score includes various dynamics such as *pp*, *pp* 2nd time only, *pp* 2nd time give higher, and *pp* 2nd time give higher.

SECTION B. ARRANGEMENTS FROM PIANOFORTE FOR THE MILITARY BAND.

Scoring of simple march movement of a few bars from Pianoforte to full Military Band. Notice the change to a suitable key—amplifying—sustained parts.

“Soldiers’ March”

Schumann

Con spirito ♩ = 120

Piano

Picc.

Fl.

E♭ Clt.

Ob.

Solo B♭ Clt.

Rep. B♭ Clt.

2nd B♭ Clt.

3rd B♭ Clt.

E♭ Alt. Sax.

B♭ Ten. Sax.

Bsn.

1st & 2nd Hns. in F

1st B♭ Corn.

2nd B♭ Corn.

1st Ten. Trom.

2nd Ten. Trom.

Bass Trom.

Euph.

Basses

Drums, etc.

Timp.

"The Orphan"

Schumann

Andante

Piano *p*

Fl. *p*

E♭ Clt. *p*

Ob. *p*

Solo B♭ Clt. *p* *pp*

Rep. B♭ Clt. *p* *pp*

2nd B♭ Clt. *p* *pp*

3rd B♭ Clt. *p* *pp*

E♭ Alt. Sax. *p*

B♭ Ten. Sax. *p*

Bsn. *p*

1st. & 2nd Hns. in F *pp* *a 2* *pp*

1st B♭ Corn. *p*

2nd B♭ Corn. *p*

1st Ten. Trom. *p*

2nd Ten. Trom. *p*

Bass Trom. *p*

Euph. *p*

Basses *p*

Drums, etc. *pp* *Tria.*

The musical score is for a piece titled "The Orphan" by Robert Schumann, starting from the piano. The tempo is marked "Andante". The key signature has two flats (B-flat and E-flat), and the time signature is 2/4. The score includes a piano part and a full orchestral arrangement. The instruments listed on the left are: Piano, Flute (Fl.), E-flat Clarinet (E♭ Clt.), Oboe (Ob.), Solo B-flat Clarinet (Solo B♭ Clt.), Repetitive B-flat Clarinet (Rep. B♭ Clt.), 2nd B-flat Clarinet (2nd B♭ Clt.), 3rd B-flat Clarinet (3rd B♭ Clt.), E-flat Alto Saxophone (E♭ Alt. Sax.), B-flat Tenor Saxophone (B♭ Ten. Sax.), Bassoon (Bsn.), 1st and 2nd Horns in F (1st. & 2nd Hns. in F), 1st B-flat Cornet (1st B♭ Corn.), 2nd B-flat Cornet (2nd B♭ Corn.), 1st Tenor Trombone (1st Ten. Trom.), 2nd Tenor Trombone (2nd Ten. Trom.), Bass Trombone (Bass Trom.), Euphonium (Euph.), Basses, and Drums, etc. The piano part begins with a *p* (piano) dynamic. The woodwinds and strings enter with various dynamics, including *p* and *pp* (pianissimo). The 1st and 2nd Horns have a *pp* dynamic and a *a 2* marking. The 1st B-flat Cornet has a *p* dynamic. The 2nd B-flat Cornet has a *p* dynamic. The 1st Tenor Trombone has a *p* dynamic. The 2nd Tenor Trombone has a *p* dynamic. The Bass Trombone has a *p* dynamic. The Euphonium has a *p* dynamic. The Basses have a *p* dynamic. The Drums, etc. have a *pp* dynamic and a *Tria.* (Trio) marking.

" Sicilienne "

Schumann

Leggiero

Piano *p*

Fl.

E♭ Clar.

Ob.

Solo B♭ Clar. *p*

Rep. B♭ Clar. *p*

2nd B♭ Clar. *p*

3rd B♭ Clar. *p*

E♭ Alt. Sax. *p*

B♭ Ten. Sax. *p*

Bsn.

1st & 2nd Hns. in F *pp*

1st B♭ Corn. *Solo p*

2nd B♭ Corn.

1st Ten. Trom.

2nd Ten. Trom.

Bass Trom.

Euph.

Basses

Drums, etc. *Tria. pp*

Picc. b

Solo

Tutti

S.D.

B.D.

"The Wild Horseman"

Schumann

Allegro con brio

Piano *mf* *sf* 1 2

Picc. *mf* 1 2

Fl. *mf*

E♭ Clt. *mf*

G♭. *mf*

Solo B♭ Clt. *mf*

Rep. B♭ Clt. *mf*

2nd B♭ Clt. *mf*

3rd B♭ Clt. *mf*

E♭ Alt. Sax. *mf*

B♭ Ten. Sax. *mf*

Bsn. *mf*

1st & 2nd Hns. in F *mf*

1st B♭ Corn. *mf*

2nd B♭ Corn. *mf*

1st Ten. Trom. *mf*

2nd Ten. Trom. *mf*

Bass Trom. *mf*

Euph. *mf*

Basses *mf*

Drums, etc. *mf*

"The Humming Bird"

Schumann

Moderato

Piano *p*

Concert Fl. & Piccolo *pp*

E♭ Clt. *p*

Ob. *p*

Solo B♭ Clt. *p*

Rep. B♭ Clt. *p*

2nd B♭ Clt. *p*

3rd B♭ Clt. *p*

E♭ Alt. Sax. *p*

B♭ Ten. Sax. *p*

Bsn. *p*

1st & 2nd Hns. in F *p*

1st B♭ Corn. *p*

2nd B♭ Corn. *p*

1st Ten. Trom. *p*

2nd Ten. Trom. *p*

Bass Trom. *p*

Euph. *pp*

Basses *pp*

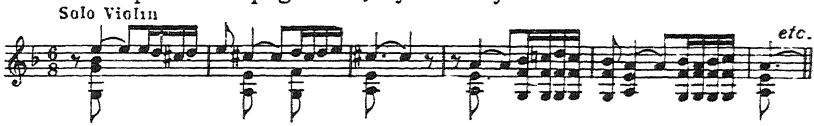
S.D. muted Perc. *pp*

Timp. in A♭ & D♭ *pp*

"Capriccio Espagnole"

Rimsky-Korsakov

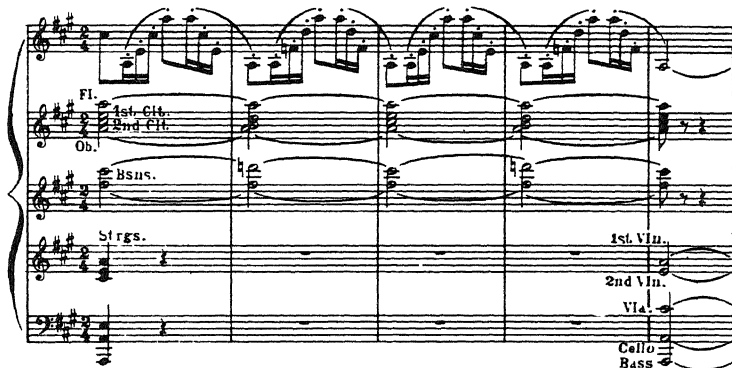
Example A. This is an example of a cadenza for Solo Violin, taken from the "Capriccio Espagnole", by Rimsky-Korsakov.



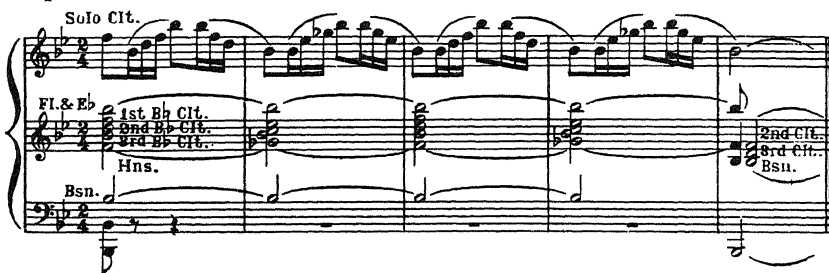
Example B. Here the same cadenza is arranged in the Military Band for three Saxophones.



Example A. The following is an excerpt from the Capriccio Espagnole by Rimsky-Korsakov. It shows a passage that requires great agility of execution on the part of the Solo Violin and is obviously impossible on any instrument of the Military Band.



Example B. This shows the above example condensed to meet the requirements of a Military Band, and yet retains the effect desired by the composer.



Andante con moto

Fl. *cantabile*

Concert Flute & Piccolo

E♭ Clt.

Ob.

Solo B♭ Clt.

1st B♭ Clt.

2nd B♭ Clt.

3rd B♭ Clt.

E♭ Alt. Sax.

B♭ Ten. Sax.

Bsn.

Hns. in F

1st B♭ Corn.

2nd B♭ Corn.

1st Ten. Trom.

2nd Ten. Trom.

Bass Trom.

Euph.

Basses

Timp. in E♭ & B♭

The musical score is arranged in a standard orchestral format. The woodwind section includes Concert Flute & Piccolo, E♭ Clarinet, Oboe, Solo B♭ Clarinet, 1st, 2nd, and 3rd B♭ Clarinets, E♭ Alto Saxophone, B♭ Tenor Saxophone, Bassoon, and Horns in F. The brass section consists of 1st and 2nd B♭ Cornets, 1st and 2nd Tenor Trombones, Bass Trombone, Euphonium, and Basses. The percussion section includes Timpani in E♭ and B♭. The score is marked 'Andante con moto' and features a 'Fl. cantabile' section. Dynamic markings include piano (p), pianissimo (pp), and fortissimo (f). The key signature has two flats (B♭ and E♭), and the time signature is 2/4.

Words", Op. 19, No. 1

Mendelssohn

This musical score is for the piece "Words", Op. 19, No. 1 by Felix Mendelssohn. It is written for piano and consists of 11 staves. The notation includes various musical elements such as notes, rests, and dynamic markings. The piece is in a key with two flats (B-flat and E-flat) and a common time signature. The score is divided into three measures, each containing three staves. The first measure features a complex rhythmic pattern in the upper staves, while the lower staves have a more melodic line. The second measure continues this pattern, and the third measure concludes with a final chord. The dynamic marking "pp" (pianissimo) is used throughout the piece, indicating a very soft volume. The score is written in a standard musical notation style, with notes and rests clearly visible on the staves.

The next examples (A) and (B), are taken from the Last Movement of the "Moonlight Sonata," Beethoven. (A) is a very fine example of modern scoring. If the parts allotted to the Euphonium, Bassoon, Tenor Saxophone and Oboe were unplayable at the *tempo* indicated, they should have been modified in some such manner as illustrated below:—

(A)

Last Movement

Presto agitato ♩ = 168

Fl.

E♭ Clt.

Ob.

Solo B♭ Clt.

Rep. B♭ Clt.

2nd B♭ Clt.

3rd B♭ Clt.

E♭ Alt. Sax.

B♭ Ten. Sax.

Bsn.

1st & 2nd Hns.
in F

1st B♭ Corn.

2nd B♭ Corn.

1st Ten. Trum.

2nd Ten. Trum.

Bass Trum.

Euph.

BASSES

Drums, etc.

"Moonlight Sonata" Beethoven

This musical score is for the "Moonlight Sonata" by Ludwig van Beethoven, specifically the third movement. It is a full orchestration of the original piano piece. The score is written for a piano and a large orchestra. The piano part is at the top, with a treble and bass clef. The orchestral parts are arranged in staves below, including Flute (Fl.), E-flat Clarinet (Eb Clt.), Oboe (Ob.), Solo B-flat Clarinet (Solo Bb Clt.), Repetitive B-flat Clarinet (Rep. Bb Clt.), 2nd B-flat Clarinet (2nd Bb Clt.), 3rd B-flat Clarinet (3rd Bb Clt.), E-flat Alto Saxophone (Eb Alt. Sax.), B-flat Tenor Saxophone (Bb Ten. Sax.), Bassoon (Bsn.), 1st and 2nd Horns in F (1st & 2nd Hns. in F), 1st B-flat Cornet (1st Bb Corn.), 2nd B-flat Cornet (2nd Bb Corp.), 1st Tenor Trombone (1st Ten. Trom.), 2nd Tenor Trombone (2nd Ten. Trom.), Bass Trombone (Bass Trom.), Euphonium (Euph.), Basses (Basses), and Drums, etc. The score includes dynamic markings such as *p* (piano), *f* (forte), and *sf* (sforzando). The key signature is one sharp (F#) and the time signature is 3/4.

Piano

Fl.

E \flat Clt.

Ob.

Solo B \flat Clt.

Rep. B \flat Clt.

2nd B \flat Clt.

3rd B \flat Clt.

E \flat Alt. Sax.

B \flat Ten. Sax.

Bsn.

1st & 2nd Hns. in F

1st B \flat Corn.

2nd B \flat Corp.

1st Ten. Trom.

2nd Ten. Trom.

Bass Trom.

Euph.

Basses

Drums, etc.

(B)

Last Movement

Presto agitato $\text{♩} = 168$

Piano *p* *sf*

Fl.

E♭ Clt.

Ob.

Solo B♭ Clt.

Rep. B♭ Clt.

2nd B♭ Clt.

3rd B♭ Clt.

E♭ Alt. Sax.

B♭ Ten. Sax.

Rsu.

1st. & 2nd Hns. in F

1st B♭ Corn.

2nd B♭ Corn.

1st Ten. Trom.

2nd Ten. Trom.

Bass Trom.

Euph.

Hasses

Drums, etc. S.D. R.D. *p*

Tenor Saxophone

Bassoon

Oboe

Euphonium

"Moonlight Sonata" Beethoven

This musical score is for the "Moonlight Sonata" by Beethoven, specifically the section starting at measure 263. The score is arranged for a piano and a large orchestra. The piano part is at the top, featuring a continuous sixteenth-note arpeggiated figure in the right hand and a steady eighth-note bass line in the left hand. The orchestral accompaniment includes a flute, E-flat clarinet, oboe, solo B-flat clarinet, reed B-flat clarinet, second B-flat clarinet, third B-flat clarinet, E-flat alto saxophone, B-flat tenor saxophone, bassoon, first and second horns in F, first B-flat cornet, second B-flat cornet, first tenor trombone, second tenor trombone, bass trombone, euphonium, basses, and drums/cymbals. The woodwinds and strings (represented by the bass line) provide harmonic support to the piano's arpeggiated texture. The score is written in G major (one sharp) and 3/4 time.

Piano

Fl.

E♭ Clt.

Ob.

Solo B♭ Clt.

Rep. B♭ Clt.

2nd B♭ Clt.

3rd B♭ Clt.

E♭ Alt Sax.

B♭ Ten. Sax.

BsII.

1st & 2nd Hns.
in F

1st B♭ Corn.

2nd B♭ Corn.

1st Ten. Trom.

2nd Ten. Trom.

Bass Trom.

Euph.

Basses

Drums, etc.

Another simple little pianoforte composition by Schumann
Observe the following points when arranging for military band :—

- | | |
|-------------------------------|---|
| (a) The pianoforte technique. | (d) Technical alteration for instruments. |
| (b) The tempo. | |
| (c) The key. | (e) The instruments used. |

“ The Rider’s Song ” Schumann

Vivace con precisione

Piano

Fl.

E♭ Clt.

Ob.

Solo B♭ Clt.

Rep. B♭ Clt.

2nd B♭ Clt.

3rd B♭ Clt.

E♭ Alt. Sax.

B♭ Ten. Sax.

Bsn.

1st & 2nd Hns.
in F

1st B♭ Corn.

2nd B♭ Corn.

1st Ten. Trom.

2nd Ten. Trom.

Bass Trom.

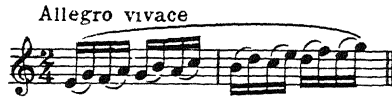
Euph.

Basses

Drums, etc.

In the previous pages of this section the arrangements have been made direct from the pianoforte parts, but it will be found that in some cases, where the technique is extremely pianistic, it is necessary first of all to make a short score arrangement before beginning to score. The advantage of this procedure is that it can be seen at a glance if the arrangement is playable by the various instrumental groups it is intended to employ, and the question of balance can then be carefully studied.

Mental hearing is a great asset in the art of arranging pianoforte music. For instance, it will at once give the solution of the following idiom :—



If the student plays this over he will find the effect is :—



The latter would, of course, be the arrangement for the Military Band.

The following are the most frequently used pianoforte idioms :—
Example I.

Allegro



Pianoforte

Arrangement

In the arrangement of Example I the triplet figure is preserved in the inner parts, which would be allotted to the 2nd and 3rd Clarinets. The bass note is brought forward, the melody and added parts sustained.

Example II.


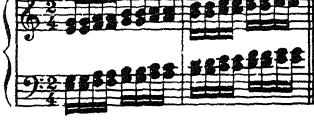
Allegro

Pianoforte  Arrangement 

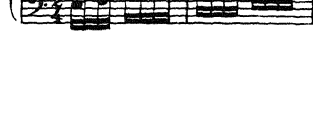

Here the arrangement differs but little from the pianoforte part. The chord is spread out in *arpeggio* form for the pianist, so that the rhythm can be made by the individual movement of the fingers. It would be extremely difficult for the pianist to play the arrangement, which would entail the whole hand being raised for each note. Notice also that the triad in the right hand appears only on the last quaver in the pianoforte part. This facilitates the movement of the fingers.

Example III.

Slow tempo

Pianoforte  Arrangement 

Quick tempo

In Example III it will be noticed how the arrangement varies according to the *tempo* of the piece. This requires no further explanation.

Example IV.



Tempo di Valse

Left Hand  Arrangement 

Example IV is a common left-hand accompaniment to a waltz. Note how the effect of the pianoforte pedal has been brought into the arrangement.

Example V.

Andante sostenuto

Pianoforte  Arrangement 

In the above example, the *arpeggio* in the pianoforte part is kept in the stretch of the left hand, but an *arpeggio* so low down would not be effective in the Military Band, when reproduced by the heavy instruments of that register.

Example VI.

Allegro

Pianoforte

In all these *arpeggio* passages it is advisable to reduce the whole to close four-part harmony, and then form the broken chord accompaniment for the arrangement from that. Notice how the movement is kept in the compass of one instrument. If the *tempo* was very quick the *arpeggio* would be formed of smaller intervals.

Allegro

Skeleton Harmony

Arrangement

Example VII.

Allegro brillante

Pianoforte

Skeleton Harmony

Arrangement

Another arrangement would be :—

The use of the three semiquaver figure after the beat in the above alternative arrangement of Example VII, especially in quick *tempos*, is not recommended, for the following reasons. Firstly, the performer has only a semiquaver's rest in which to breathe, and secondly, when more than one performer is on the same part they rarely have the same idea as to the value of the semiquaver's rest, and more often than not play a triplet.

Example VIII.

Allegro vivace

Pianoforte Arrangement

Notice the alternate use of the left and right hand in Example VIII, and how the composer gets the double octave effect in the last bar. The *arpeggio* in the first bar moves about on one chord. The whole chord can be played in that rhythm in the arrangement.

Example IX.

Presto

Pianoforte Arrangement

To produce this *crescendo* the pianoforte has to reiterate in octaves the ascending passage. There is no need for semiquaver movement in the arrangement, though a side-drum or timpani roll would add greatly to the effect.

The following are similar idioms and need no further explanation :—
Example X.

Allegro vivace

Pianoforte Arrangement

Example XI.

Allegro

Pianoforte

Arrangement

Example XI shows two musical staves. The top staff is labeled 'Pianoforte' and the bottom staff is labeled 'Arrangement'. Both are in 6/8 time and marked 'Allegro'. The Pianoforte part features a melody in the right hand with eighth-note patterns and rests, while the left hand plays a steady eighth-note accompaniment. The Arrangement part features a more complex texture with dense chords and sixteenth-note patterns in both hands.

Example XII.

Allegro vivace

Pianoforte

Arrangement

Example XII shows two musical staves. The top staff is labeled 'Pianoforte' and the bottom staff is labeled 'Arrangement'. Both are in 4/4 time and marked 'Allegro vivace'. The Pianoforte part features a melody in the right hand with eighth-note patterns and rests, while the left hand plays a steady eighth-note accompaniment. The Arrangement part features a more complex texture with dense chords and sixteenth-note patterns in both hands.

Example XIII.

Allegro vivace

Pianoforte

Arrangement

Example XIII shows two musical staves. The top staff is labeled 'Pianoforte' and the bottom staff is labeled 'Arrangement'. Both are in 3/8 time and marked 'Allegro vivace'. The Pianoforte part features a melody in the right hand with eighth-note patterns and rests, while the left hand plays a steady eighth-note accompaniment. The Arrangement part features a more complex texture with dense chords and sixteenth-note patterns in both hands.

Example XIV.

Allegro brillante

Pianoforte

Arrangement

Slow tempo

In quick tempo

Example XIV is another instance of the alternate use of both hands, and the double octave effect. Note the modification for quick *tempos*.

Example XV.

Moderato

Pianoforte

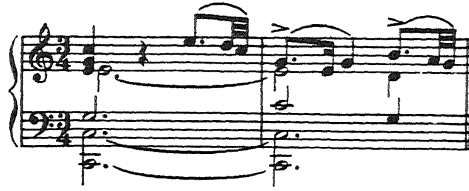
Arrangement

In Example XV notice the arrangement of the semiquaver figure in the treble stave, and the figure given out with the left hand.

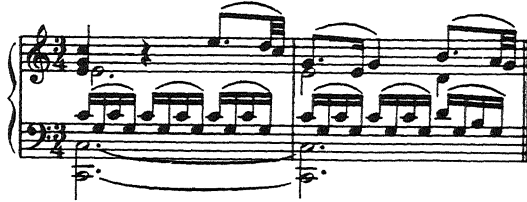
Example XVI

Allegro vivo

Pianoforte

Skeleton
Harmony

Arrangement



Particular notice should be taken of the following points in Example XVI :—

- (a) The *tempo*.
- (b) The pedal running through.
- (c) The arrangement of the *arpeggio*.

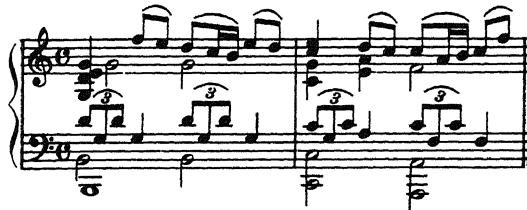
Example XVII.

Allegro brillante

Pianoforte



Arrangement



In the above example notice how the *arpeggio* has been kept in a nice register for the 2nd and 3rd Clarinets, who will reproduce it, in the arrangement.

Example XVIII.

Allegro vivace

Pianoforte



Arrangement

To preserve the semiquaver rhythm in Example XVIII, which is a feature of the extract, two passages have been evolved, which between them give the effect of repeated semiquavers in the most practicable way for the performers. In this case the melody has been isolated and the figure in the bass retained with some modification.

Example XIX.

Allegro vivace

Pianoforte

Arrangement

Owing to the quick *tempo* of Example XIX nothing that requires tonguing appears in the arrangement.

The following are extracts from Chopin's Etudes, and present a further degree of difficulty, but if a careful study of the previous examples has been made, the arrangements of these will be readily understood.

Op. 25. No. 3

Chopin

Example XX.

Allegro

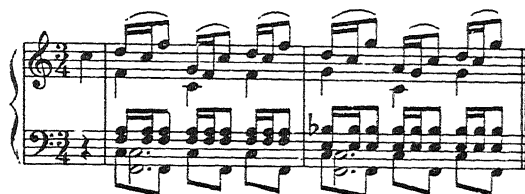
Pianoforte

leggiéro

Skeleton Harmony

In this four-part version the unessential notes have been omitted to make the chordal construction more clear.

Transcription



Example XXI.

Op. 25. No. 11

Chopin

Allegro con brio ($\text{♩} = 60$)

Pianoforte

mf

6

6

6

6

6

*

And.

mf

3

3

3

3

3

mf

6

6

6

6

6

Arrangement

Example XXII.

Op. 25. No. 1

Chopin

Allegro sostenuto (♩ = 104)

Planoforte

p

Fl.

p

Arrangement

p



Example XXIII.

Op. 25. No. 9

Chopin

Assai allegro (♩ = 112)

Planoforte

leggiere

Arrangement



Op. 28

Chopin

Example XXIV.

Molto agitato

The musical score for Example XXIV is for Piano and Flute. The tempo is *Molto agitato*. The Piano part is marked *Pianoforte* and *mf*. The Flute part is marked *Fl.*. The score consists of two systems. The first system shows the Piano part with a melodic line and the Flute part with a melodic line. The second system shows the Piano part with a melodic line and the Flute part with a melodic line. The score includes various musical notations such as notes, rests, and dynamic markings.

To conclude this section more suitable examples than the following could not be given :—

Example XXV.

“ Aus Holberg’s Suite ”

Grieg

Allegro vivace

The musical score for Example XXV is for Piano and Flute. The tempo is *Allegro vivace*. The Piano part is marked *pp* and *fz*. The Flute part is marked *Fl.*. The score consists of two systems. The first system shows the Piano part with a melodic line and the Flute part with a melodic line. The second system shows the Piano part with a melodic line and the Flute part with a melodic line. The score includes various musical notations such as notes, rests, and dynamic markings.

By permission of C. F. Peters

This extract, originally written as a pianoforte solo, was subsequently arranged by the composer himself for the orchestra. The fact that it is arranged for the orchestra and not for the Military Band does not lessen its value in this section, for it emphasizes the point that considerable alteration has frequently to be made in the arrangement.

Finally a Military Band arrangement of the well-known "Hungarian Rhapsody" No. 2, by Franz Liszt. Here the arranger has modified the tremolo effect in the melody by a trill on the Piccolo followed by the Flute. The *arpeggi* figure later gives the happy tripping effect which is essential to this type of work. It is also interesting to note the way in which the arranger has dealt with the *rapidamente* passage in bar 4 of the Piano part by treating it as a Flute Solo.

"Hungarian Rhapsody" No. 2

F. Liszt

(Pianoforte)

Capriccioso e leggerissimo

The first system of the piano score for 'Hungarian Rhapsody' No. 2. It consists of two staves. The upper staff is in treble clef with a key signature of one flat and a 2/4 time signature. It begins with a *pp* dynamic and features a rapid, arpeggiated melody. The lower staff is in bass clef and provides harmonic support with chords and single notes. Rehearsal marks are indicated by asterisks and the word 'Trio.' below the staff.

(Military Band)

Capriccioso e leggerissimo

The first system of the Military Band arrangement. It features multiple staves for different instruments. The Piccolo (Pico.) and Flute (Fl.) parts have trill markings. The Clarinet (Cfts.) and Bassoon (Rsn.) parts are marked with *p*. The Horn (Hn.) and Euphonium/Bassoon (Euph. & Bsn.) parts are also marked with *p*. The Eb Solo Clarinet (Fl. Eb & Solo Cfts.) has a trill marking. The Bass (Bass) part is marked with *p*. The score includes a section marked '14' and a section marked 'p sempre e giocondo'. The second system continues the arrangement with similar instrumentation and dynamics.

SECTION C.

ARRANGEMENTS FROM THE ORGAN FOR THE
MILITARY BAND

To arrange an organ work with any success a knowledge of the instrument is essential if the many pitfalls are to be avoided. For the student's benefit a few characteristic examples will be taken and then arranged in short score for the Military Band, showing how, by the use of the various stops and manuals, the organist produces effects quite different from what at first sight appears on paper.

The average medium size organ has three manuals and pedals, and anything from twenty to fifty stops. The manuals are known as Swell, Great and Choir, and derive their names in the following manner :—

The Swell organ was at one time the only section to be enclosed in a box, with an opening front like a Venetian blind, so that it was possible to obtain a *crescendo* or *decrescendo* from the same rank of pipes.

The Great organ is that section which produces the heavy bodywork of tone.

The Choir organ, which, in modern instruments, is also enclosed in a swell box, contains stops of a quieter timbre, more suited to the accompaniment of voices or solos on other manuals.

The Pedals are a separate department, played, of course, by the feet, and provide the bass for any of the manuals.

It will be readily seen that many contrasts in tone are available by the alternate use of the manuals.

A word as to the stops may be helpful. These are divided into three classes—known as Reeds, Flues and Mutation stops. It is in the understanding of these that success in arranging largely depends.

Briefly, the reed stops produce a brassy tone, the flue stops give a full round tone, whilst the mutation stops, by introducing higher harmonics, give brightness to the foundation tone. Typical examples of each are :—

Reeds.—Trumpet, Clarion, Oboe, Clarinet, Vox Humana, Tuba, Trombone, Cornopean, Horn and Posaune.

Flues.—Open diapason and Stopped diapason, Hohl Flute, Clarabella, Dulciana, Gamba, Lieblich.

Mutation.—Every stop speaking a note other than the one implied by the key struck (or some 8ve of it), *e.g.* the Twelfth, speaking “ G ” on the “ C ” key.

Vox Humana.—So called because it was thought to imitate the human voice.

Tuba.—From the Orchestral Tuba. “ The most powerful stop on the Organ.”

Diapason (Greek, all through).—The foundation stops of the Organ. These pipes are sometimes used as show pipes in the front of the Organ.

Hohl Flute (Ger., hollow flute).—So called because it has a somewhat hollow tone.

Clarabella.—So named by its inventor, Bishop.

Dulciana, from It. dolce (sweet).—"A very small Diapason." Invented by Snelzter, and usually found in the Choir Organ.

Gamba (It., leg).—So called because its tone resembles the Viol da Gamba (Violoncello).

Lieblich (Ger.), a prefix meaning lovely or sweet—"Lieblich Flute." It is a stopped diapason invented by Schulze.

Principal.—A 4-feet Diapason, and referring to the chief metal 4-feet pipes.

Mixtures.—Stops having two or more ranks of pipes (tuned to the intervals of the common chord) on each note.

Voix celeste.—A stop of soft tone tuned a little sharper than the general pitch of the instrument. When used with another soft stop produces a *tremolo* effect.

A very important item under this heading is the pitch of the stops. The normal pitch is produced by an 8-feet rank of pipes, so that any directions given for an 8-feet combination will mean that only the actual note written will be produced. The 16-feet tone *sounds* an octave lower than written, whilst the 4-feet an octave above, and the 2-feet two octaves above the actual notes written. Some organs possess a 32-feet register, which sounds two octaves lower than written.

The following examples will show how the composer's instructions can be arranged for the Military Band :—

"Caprice"

A. Gregory

(Organ)

Allegro brillante (♩ = 130)

The musical score is written for three staves. The top staff is labeled 'Swell 8ft. Reed' and 'Ch. 8ft. Flutes'. The middle staff is labeled 'Gt. 8ft.'. The bottom staff is unlabeled but contains a lower register. The music is in 2/4 time and features dynamic markings like 'mf' and 'etc.', and articulation like 'Swell' and 'Ch.'.

(Military Band)

Musical score for Military Band. The score is in 2/4 time and features a key signature of one flat. The instruments and their parts are:

- Solo & Rep. Clts., Eb Clt. & Fl.**: Solo part for the first four measures, then repeated parts for the last four measures.
- Ob.**: Oboe part, playing a sustained note.
- Hns.**: Horns, playing a sustained note.
- Cornets**: Playing a melodic line with triplets.
- Alt. Sax., 2nd Bb Clt., 3rd Bb Clt.**: Alto Saxophone, 2nd Bb Clarinet, and 3rd Bb Clarinet parts, playing a melodic line with triplets.
- Bsn. & Ten Sax.**: Bassoon and Tenor Saxophone parts, playing a sustained note.
- 1st & 2nd Trombs.**: 1st and 2nd Trombone parts, playing a sustained note.
- Euph. & Bases**: Euphonium and Basses, playing a sustained note.

The above extract is an example of one manual answering the other—a device very often used. Notice also that the reeds of the Organ do not correspond with the reeds of the Military Band.

Extract from Organ "Sonata in F"

Lemmens

Musical score for Organ and Military Band. The score is in 2/4 time and features a key signature of one flat. The tempo is marked *Andante sostenuto*. The instruments and their parts are:

- Organ**:
 - Gt.**: Great Organ, playing a melodic line.
 - Stp. Diap.**: Stop Diapason, playing a sustained note.
 - Su.**: Swell, playing a melodic line.
 - Cel.**: Celeste, playing a sustained note.
 - soft. 16 & 8**: Soft 16 and 8 feet, playing a sustained note.
- Military Band**:
 - 1st. Cornet**: 1st Cornet, playing a melodic line.
 - 1st. Tromb.**: 1st Trombone, playing a sustained note.
 - 2nd Tromb.**: 2nd Trombone, playing a sustained note.
 - Bass Tromb.**: Bass Trombone, playing a sustained note.
 - Euph.**: Euphonium, playing a sustained note.
 - Russes**: Russian, playing a sustained note.
 - Solo Clt.**: Solo Clarinet, playing a melodic line.
 - Ob.**: Oboe, playing a sustained note.
 - Rep. Clt. & 1st. Hn.**: Repeated Clarinet and 1st Horn, playing a sustained note.
 - 2nd Clt. & Alt. Sax.**: 2nd Clarinet and Alto Saxophone, playing a sustained note.
 - 3rd Clt. & Ten. Sax.**: 3rd Clarinet and Tenor Saxophone, playing a sustained note.
 - 2nd Hn. & Bsn.**: 2nd Horn and Bassoon, playing a sustained note.
 - Bases**: Bases, playing a sustained note.

By permission of Schott & Co.

This is another example of a change of colour obtained by the alternate use of the manuals, this time between the Great and Swell. In the Military Band arrangement it will be noticed that the pedal part is in double octaves, owing to the effect of the 16-foot pedal stop.

"Adagio"

A. Gregory

Adagio con molto espressione ($\text{♩} = 60$)

Organ

Ch.
pp

Sw.
soft 8ft. & 16ft. etc.

Military Band

Solo Clts.
Ob. & Rep. Bb Clt. Alt. Sax.
2nd Bb Clt.
3rd Bb Clt.
Bsn.
Euph.
Basses
pp etc.

The softest voice of the Military Band, the woodwind, reproduces the choir organ part, and the usual accompanying instruments, the 2nd and 3rd Clarinets, with the Bassoon, are allotted the Swell organ stave. Here again there is a 16-feet pedal.

"Fantasie"

A. Gregory

Allegro brillante ($\text{♩} = 120$)

Organ

Gt. to Principal
Full Swell (without Reeds Box closed)
cresc. poco a poco etc.

16 8 & 4ft. *mf*

Military Band

Fl. Eb & Solo Clts.
Ct. to Principal
add Picc.
cresc. poco a poco etc.

Ob. & Rep.
Cornet & 2nd Clt. Ten. Sax. & 3rd Bb Clt.
Alt. Sax. & 2nd Cor.
2nd Hn.
Euph.
1st Hn.
Bsn. & B. Trom.
Basses
mf

add Trombs.
cresc. poco a poco

In the above extract the indication, Great to Principal, means that the full tone of the Diapasons is used, with the addition of the brightness obtained by the 4-feet principal. The melody of the arrangement is, therefore, in octaves.

Full swell without reeds indicates that all the available stops of the flue and mutation classes are being used. The presence of the 2-feet tone gives a much brighter effect than Great to Principal, hence the addition of the Piccolo. At the beginning of the *crescendo* the box of Swell organ is closed. This is, of course, gradually opened until the climax is reached.

"Fantasie"

A. Gregory

Allegro
Sw. 16 8 & 2ft..

Organ

Military Band

Bases cul gva basso

In the above extract the 2-feet stop sounds above the compass of the Military Band, for even the Piccolo cannot produce the "C" two octaves above the one written. In all cases such as this, and similarly when the 32-feet or 16-feet pedal sounds below the lowest note produced by the bases, the nearest possible arrangement must be given.

"Wo soll ich Fliehen hin"

Bach

Choral Prelude

* 1st Clav. 8 Fuss

2 Clts. 16 Fuss

Pedale 4 Fuss

* Clavier = Manual

Organ

Military Band

Bases

The above extract from one of Bach's Choral Preludes is an example of the use of the 4-feet pedal, which in places sounds above both manuals.

In the arrangement it will be noticed that the semiquaver passage in the right hand has not been given to the Clarinets, as it lies in their weakest register—"break" (see Part I).

In another extract from one of Bach's Choral Preludes there is a double pedal part, both parts being, of course, played with the feet. It would not be effective to put the Bases on the bass part which goes well up into the stave, so the usual custom of doubling the bass part in octaves for the Euphonium and Bases has been adopted. If, however, there was a clear indication for only an 8-feet tone this procedure would not have been adopted.

"Choral Prelude"

Bach

Andante

Organ

p

Solo & Rep. B♭ Clts.

p 2nd B♭ Clt. & Alt. Sax.

3rd B♭ Clt. & Ten. Sax.

p Euph. & Ebn.

Basses col gva basso

The use of Sub and Super Octave couplers should be noted.

The two following examples are self explanatory.

* Swell with octave coupler

Sounding

Swell with Sub octave coupler

Sounding

* Octave coupler implies Super gve

On most modern Organs there is a device known as "Unison off," which, when used with one or both of the octave couplers, shuts off the sound from the notes actually held down. Thus :—

Swell, Sub, & Super 8ve Couplers, Unison off.



will sound



To conclude this section two extracts from Fugues by Bach are given, and the author earnestly advises the student to procure the organ parts of the Fugues, arrange them for Military Band, and then compare his arrangements with the published edition (obtainable from Messrs. Boosey & Hawkes, Ltd.).

In this arrangement for the Military Band of the Fugue on "St. Anne's Tune," by Bach, careful attention should be paid to the following points :—

- (1) Bach rarely appended any marks of expression to his organ fugues, therefore the arranger must add his own to his Military Band arrangement, according to his musical feeling.
- (2) It will be noticed how instrumental groups are toned down after they have given out the subject or answer as the case may be.
- (3) Parts must be phrased to indicate to the performer the best place to breathe. Obviously this is not required in organ music.
- (4) The pedals of the Organ are reproduced in the Military Band by its lowest voice, the Basses. In this example it will be observed that the Basses are reserved for the pedal entry.

Fugue on " St. Anne's Tune "

Bach

Maestoso

Manual
ORGAN
Pedal

Concert Fl.
E♭ Clar.
Ob.
Solo B♭ Clar.
Rep. B♭ Clar.
2nd B♭ Clar. *legato*
3rd B♭ Clar. *legato*
E♭ Alt. Sax. *legato*
B♭ Ten. Sax. *legato*
Bsn. *legato*
1st & 2nd Hrn. in F *legato*
1st B♭ Corn.
2nd B♭ Corn.
1st Ten. Trom.
2nd Ten. Trom.
Bass Trom.
Euph.
Basses
Perc.

Fugue in C Minor

Bach

Manual

ORGAN

Pedal

(Military Band)

Fl. E♭ Clt. Ob. & Solo B♭ Clt. *mf*

1st, 2nd & 3rd Clts. & Alto Sax. *mf*

Bsn. & Euph.

Basses give lower

Tenor Trombs, Hns. & Tenor Sax. *etc.*

SECTION D

ARRANGEMENTS FROM VOCAL MUSIC FOR THE MILITARY BAND

In this Section—the arrangement of Vocal Music for the Military Band—various songs have been selected for treatment. To illustrate each voice, numerous examples from the Operas will be given, and the Military Band arrangement of each extract will be shown. To save space, and to enable the student to see at a glance both the Orchestral and Military Band arrangements, the Orchestral score of the Operatic examples will be condensed to pianoforte score, and for the Military Band arrangements a condensed conductor's score will be given.

The first examples will be full scores of Military Band arrangements of three of Schubert's Songs, together with the original pianoforte accompaniment. A careful study of these will be well repaid. Particular attention should be paid to the instruments which have the accompaniment, as in numerous arrangements of songs that are published for the Military Band the soloist is often lost through being over-weighted.

In the arrangement of "Ave Maria" the voice part is given to more than one instrument. This is always effective when the *tempo* is slow. The other two songs, "Serenade" and "Adieu," have been arranged as Cornet solos, with a very delicate but satisfactory accompaniment. These extracts are equally valuable as examples of arranging from the pianoforte, which was dealt with in Section B.

Schubert

Moderato

Voice

Piano

pp

Softest plead-ings shall my song bear Thro' the night to

Fl. & Picc.

E♭ Clt.

Ob.

Solo E♭ Clt.

Rep E♭ Clt.

2nd E♭ Clt.

3rd E♭ Clt.

E♭ Alt. Sax.

B♭ Ten. Sax.

Bsn.

Hns. in F

1st E♭ Corn.

2nd E♭ Corn.

1st Ten. Trom.

2nd Ten. Trom.

Bass Trom.

Euph.

Basses

Perc.

p

p dolce

pp

pp

pp

“ Ave Maria ”

Schubert

[illegible]

a, Maid - - en mild, Ah list - en to a maiden's pray - er; For thou canst hear that from the

The first system of the musical score consists of a vocal line and piano accompaniment. The vocal line is written in a single staff with a treble clef and a key signature of one flat (B-flat). The lyrics are: "a, Maid - - en mild, Ah list - en to a maiden's pray - er; For thou canst hear that from the". The piano accompaniment is written in two staves, with the right hand in treble clef and the left hand in bass clef. The music is in a 4/4 time signature and features a complex, flowing melody in the right hand and a more rhythmic, supportive line in the left hand.

The second system of the musical score consists of multiple staves for piano accompaniment. The system is divided into three measures. The first measure shows a complex, flowing melody in the right hand and a more rhythmic, supportive line in the left hand. The second measure continues the melody, with the right hand playing a series of sixteenth notes and the left hand providing a steady bass line. The third measure concludes the system with a final chord in the right hand and a sustained note in the left hand. The piano accompaniment is written in two staves, with the right hand in treble clef and the left hand in bass clef. The music is in a 4/4 time signature and features a complex, flowing melody in the right hand and a more rhythmic, supportive line in the left hand.

Song : " Adieu "

Schubert

Andantino espressivo

Voice
Behold the last and mo-ment, Our part-ing hour is

Piano
p

Concert Fl. & Picc.
p

E♭ Clar.
p

Ob.
p

Solo E♭ Clar.
p

Rep. E♭ Clar.
p

2nd E♭ Clar.
p

3rd E♭ Clar.
p

E♭ Alt. Sax.
p

E♭ Ten. Sax.
p

Bsn.
p

Horn in F
p

1st B♭ Corn.
p

2nd B♭ Corn.
p

1st Ten. Trom.
p

2nd Ten. Trom.
p

Bass Trom.
p

Euph.
p

Basses
p

Perco.
p

Solo p dolce

The following extracts are taken from the Operas, and include solos for the Soprano, Contralto, Tenor and Bass voices. The Military Band arrangements will show the best instruments to which the various solos may be allotted.

The first two examples are taken from Verdi's Opera "Rigoletto," and show how well the Clarinet is suited to the florid *cadenzas* often found in Soprano solos. In nearly all these examples it will be noticed that the Military Band arrangements have been transposed to a suitable key. This procedure has been explained in Section A.

Orchestra and Voice

Allegro assai moderato (♩ = 76)

GILDA
(Soprano)

Orchestra

Ca - ro no - me che il mio

cor fe - sti pri - mo pal - pi - tar, le de -

Military Band and Solo Instrument

(♩ = 76)

Solo B♭ Clarinet

Military Band

2nd & 3rd Clts.

Hus. *p*

Euph. & Bases

E♭ Clt. & Fl.

Orchestra and Voice

GILDA
(Soprano)

Fin l'ul - ti - mo se spi - ro tuo sa -

Orchestra

Military Band and Solo Instrument

Solo Bb Clarinet

E♭ Clt.
Ob.

Military Band

2nd & 3rd Clts.
Ten. Sax.
Bsn. & Euph.

Gounod's Opera "Romeo and Juliet" provides us with another similar example of a Soprano solo taken by the Clarinet. The accompaniment to such a delicate instrument must of course be extremely light, and is usually allotted to the 2nd and 3rd Clarinets and Horns, with the Bass and Euphonium on the beat.

Orchestra and Voice

Tempo di Valse

GIULIETTA
(Soprano)

mf

Ah!..... Ah!.....

Orchestra

p

Military Band and Solo Instrument

Solo B♭ Clarinet.

mf Rep. Clt.

Military Band

2nd & 3rd B♭ Clts.
(Brass on the beat) *pp*

pp

Bass & Euph.

Orchestra and Voice

GIULIETTA
(Soprano)

f

Ah!.....

Orchestra

f

Nei - - la cal - - ma.....

Military Band and Solo Instrument

Solo B♭ Clarinet.

Military Band

Full Band

Rep. 2nd & 3rd Clts.

Euph. & Basses

Contralto solos are usually given to the Cornet. The following extracts are taken from Bizet's Opera "Carmen," and are admirably suited to the instrument. In the first example, the E♭ Clarinet has the solo an octave higher with the Cornet. This is a common device, another favourite combination being the Cornet and Trombone in octaves. The object, of course, is to strengthen the solo part, and so allow for a heavier accompaniment.

Orchestra and Voice

Allegretto quasi Andantino

CARMEN
(Contralto)

A-mor, mis-te-ri-o-so an-gel-lo, nes sun lo puo do-mes-ti-car.

Orchestra

p

Military Band and Solo Instrument

Solo Cornet.

E♭ Clar.

Military Band

Hns.
2nd & 3rd Clts.
Bsn. & Euph.

Basses

Orchestra and Voice

Andantino

CARMEN
(Contralto)

Was ist, Zi-geuners hüch ste Lust?... Wenn heimatli-che Tö-ne - klin - gen Er-

Orchestra

pp

Military Band and Solo Instrument

Solo Cornet.

Hns. & 2nd & 3rd Clts.

Military Band

Euph.

Basses

Tenor solos can be given to the Tenor Trombone or the Euphonium, usually the former. In the first extract from Gounod's Opera "Faust" the solo is given to the Trombone, which excels in this type of *legato* solo. The second extract is the famous "Toreador Song" from "Carmen," taken by Escamillo, who is a baritone. The Euphonium is an admirable medium for baritone solos, and this song provides it with one of its best solos.

Orchestra and Voice

Andantino (♩ = 56)

FAUST
(Tenor)

All hail, thou dwelling pure and low-ly! All hail, thou dwelling pure and low-ly!

Orchestra

Military Band and Solo Instrument

Solo
B♭ Trombone

Military
Band

Solo B♭ Ctt.

Rep. Ctt.
2nd & 3rd Ctt.
Bsn.
Euph.
Bass

Orchestra and Voice

Andante

ESCAMILLE
(Baritone)

Con voi ber af fe mi fia ca - - re, coi

Orchestra

mi-li-tar..... trat tar da pare a par, Deve un To-rea-dor.

Military Band and Solo Instrument

Euphonium

Rep. Ctt. Hns.

2nd & 3rd Ctt.

Military Band

Bass Tromb.

Bases

Solo Eb Ctt.

Eb Ctt. & Fl.

Saxes.

Cornets

Trombs.

The Euphonium is the only instrument in the Military Band which can take a solo for the bass voice with any success, and the following extract from Gounod's "Faust" gives us a very effective arrangement for this instrument.

Orchestra and Voice

Moderato (♩ = 92)

MEPHISTOPHELES (Bass)

Clear the way.....for the Calf of Gold! In his pomp and pride a-

Orchestra

f

ff

p

Military Band and Solo Instrument

Moderato (♩ = 92)

Euphonium

1st Cornet & Solo Clt.

2nd & 3rd Clts. & Saxs.

Hns.

Basses

Trombs & Basses

When arranging a duet, be sure to choose two instruments that blend well, and not a combination where one overbalances the other. The following extract from Gounod's Opera "Romeo and Juliet" is an excellent example of a duet, the two solo instruments blending perfectly.

Orchestra and Voices

Moderato Quasi Andante

GIULIETTA (Soprano)

ROMEO (Tenor)

Orchestra

Ah! questo ad - dio si dol - ce al nostro co - re Du - rar, du -

Ah! questo ad - dio si dol - ce al nostro co - re Du - rar, du -

p *cresc.* *f* *p*

Military Band and Solo Instruments

Moderato Quasi Andante

Solo B♭ Cornet

Solo B♭ Trombone

Military Band

Solo Clt.

2nd & 3rd Clts.

Bsns.

Euph. & Bass

p *cresc.* *f* *p* *tempo* *p* *mf*

The following extracts from Verdi's Opera "Il Trovatore" will show how a hidden chorus has been arranged. The chief point to notice is the change of tone colour for the Orchestra and Chorus, viz., Chorus—Brass, Orchestra—Reed. The duet this time is taken by the Clarinet and Cornet, another very effective combination. The Military Band arrangement is in E \flat to allow the songs to be in the best register for the solo instruments.

Orchestra and Voices

Andantino

The musical score is for a scene from Verdi's opera "Il Trovatore". It features a duet between Leonora (Soprano) and Trovatore (Tenor), with a hidden chorus and orchestra. The tempo is marked "Andantino".

Leonora (Soprano): cold, till his lov'd form is life - less and

Trovatore (Tenor): have com pas - - - - -

Hidden Chorus: have com pas - - - - -

Orchestra: (Piano) The orchestra plays a rhythmic accompaniment of eighth notes in the right hand and a more complex pattern in the left hand.

Leonora (Soprano): cold. Now..... with my life ful - fill - - - ing

Trovatore (Tenor): - sion!

Hidden Chorus: - sion!

Orchestra: (Piano) The orchestra continues with the same rhythmic accompaniment.

Military Band and Solo Instruments

Andantino

Solo
B♭ Clarinet

Solo
B♭ Cornet

Horns &
Trombones

Military
Band

Rep. Clt.
2nd & 8rd Clts. Saxes. & Bsn.
Euph.
Bass

Orchestra and Voices

Andantino

dim.

Hidden
Chorus

fall a prey to end - less burn - - - -
fall a prey to end - less burn - - - -
fall a prey to end - less burn - - - -

Orchestra

Passing Bell

IFONORA (Soprano)

- ing. O'er yon - der dark tow - er,

- ing

- ing.

ppp

The musical score for 'IFONORA (Soprano)' features a soprano vocal line and a piano accompaniment. The vocal line has lyrics: '- ing. O'er yon - der dark tow - er,'. The piano part is marked *ppp* and consists of a dense, rhythmic accompaniment in the right hand and a more active bass line in the left hand. The key signature has two flats (B-flat and E-flat), and the time signature is 4/4.

Military Band and Solo Instruments

Andantino

Solo
B♭ Clarinet

Military Band

pp Brass

dim.

Bell

The musical score for 'Military Band and Solo Instruments' is in Andantino tempo. It features a solo B♭ Clarinet part and a Military Band part. The Military Band part includes Brass instruments, marked *pp*, and a Bell. The key signature has two flats (B-flat and E-flat), and the time signature is 4/4. The score includes a dynamic marking of *dim.* (diminuendo) for the Brass.

ppp Clts. Saxes. & Hus.

Euph.
Bass

The musical score for 'Military Band and Solo Instruments' continues with a piano accompaniment. The piano part is marked *ppp* and consists of a dense, rhythmic accompaniment in the right hand and a more active bass line in the left hand. The key signature has two flats (B-flat and E-flat), and the time signature is 4/4. The score includes a dynamic marking of *ppp* (pianissimo) for the piano part.

If all the examples in this Section have been carefully studied, no difficulty should be found in arranging vocal music, whether with pianoforte or orchestral accompaniment.

PART III. Training and Conducting of the Military Band

Section A

TRAINING OF A YOUNG BAND

It is essential when forming a new Band to apportion the various beginners to instruments suited to their particular embouchure as follows (bearing in mind that it is of the utmost necessity to the individuals concerned that they should have good teeth, both in the upper and lower jaws).

Those with thin lips to be apportioned to :—

The Flute and Piccolo.
The Cornet.
The French Horn.

Those with medium lips :—

The Oboe.
The Clarinet.
The Bassoon.
The Trombone.

Those with thicker lips :—

The Saxophone.
The Bass Trombone.
The Euphonium.
The Bass.

The next stage in the selection of instrumentalists is the consideration of the individual from the point of view of a "good ear," *i.e.*, a good sense of tonality and pitch of notes.

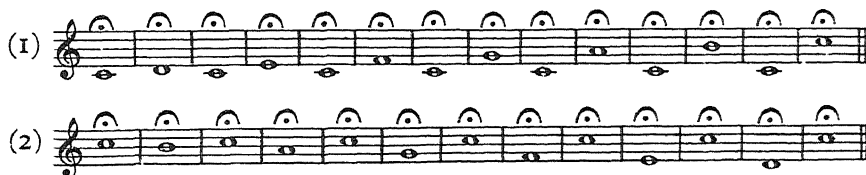
Those specially gifted in this direction should be placed on such instruments as :—

Oboe.
Bassoon.
French Horn.
Trombone.

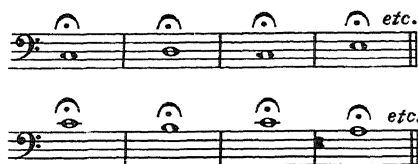
The possession of a good musical ear is of the utmost importance to instrumentalists, especially those allotted to the four instruments mentioned, as the absence of this gift may easily cause the performer to be guilty of mispitching and playing out of tune. In instances where pupils have not a good natural musical ear it should be cultivated by continued and progressive aural training on the lines of the following exercises, which may be amplified at the discretion of the conductor.

PROGRESSIVE AURAL TRAINING

Give the note "C₄" then play the following notes :—Asking the pupil to name them :—



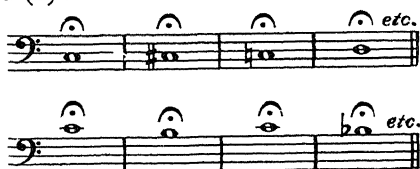
Then Nos. (1) and (2) should be played an octave lower in the bass clef :—



When the pupil has mastered the above diatonic intervals, the whole class should be examined, calling upon pupils haphazard. Then chromatic intervals should be given :—



Then Nos. (3) and (4) should be played an octave lower, as in the case of Nos. (1) and (2) :—



Intervals should now take a wider range :—



Now melodies of a fairly simple nature should be played :—
(Played at least four times, in sections of 2 or 4 bars.)



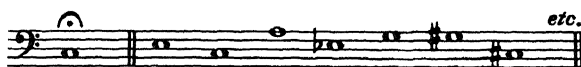
Then other melodies, in different keys, of a more elaborate nature, could be attempted, followed by simple duets and trios, as the pupils become more proficient.

Exercises should now take a more musical and difficult style.

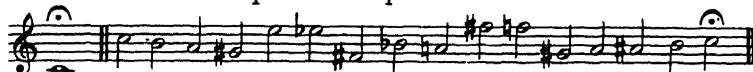
Strike the note "C," then ask the pupil to name the notes in the order sounded.



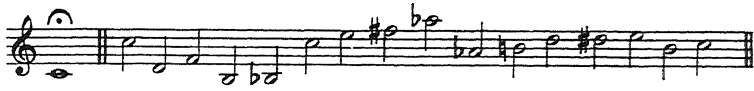
Then to be played an octave lower :—



To be followed in a quicker tempo :—



These notes could now take a wider range :—



Now again place above questions in the different keys.

The exercises should now be quickened in tempo, but the range of interval should not be increased, and the pupils should answer on paper, naming the correct notes. Each exercise treated as follows :—



These should now be followed by exercises on intervals, struck together, the pupil stating on paper or orally, a major 2nd or 3rd—perfect 4th.



Then quickened in tempo.



The above exercises could now be amplified by putting them in different keys.

Pupils should be trained from the commencement on the following lines :—

- (1) Rudiments of music—taught from a blackboard.
- (2) The names and pitch of notes, etc., with other elements of music.
- (3) The individuals taught to develop a correct embouchure, as once an incorrect embouchure is developed through bad teaching it is exceedingly difficult to correct.

Faults to Avoid.—(a) A common fault amongst players of Brass Instruments, particularly, is that of not placing the mouthpiece correctly on the centre of the lips, or, alternatively, having too much of either lip on the mouthpiece. The correct positions for playing are shown in illustrations following.

(b) Clarinet, Saxophone, Oboe and Bassoon players place either too much or too little of the mouthpiece in the mouth.

(c) Holding the instrument at an incorrect angle to the body and with slope towards the right or left side—a most inelegant and incorrect stance.

Holding the Instrument.—The instrument is often held at an angle of either 15 or 90 degrees, instead of about 45 degrees in the case of the Clarinet and Oboe, and at about 75 degrees instead of 90 degrees in the case of the Cornet and Trombone. Flute players invariably hold their instruments at about 45 degrees, and in some cases more, whereas the correct angle is from 90 degrees to 75 degrees.

On no account should the cheeks be blown out when playing the instrument. This prevents the muscles of the cheeks and lips from functioning in the correct manner and is also very inelegant.

The Position of the Hands and Fingers.—The correct position of the arms, elbows and fingers of a performer are of the utmost importance. Any faults—small and insignificant as they may appear—if once acquired have a very big bearing upon the ultimate results.

The elbows should be slightly away from the body, the fingers loose and flexible.

In the case of an instrument with a series of holes, such as Flute, Oboe, Clarinet, etc., the ball of the tips of the fingers should cover the holes tightly. In the case of valve instruments the ball of the finger should press down the valve, *not* the middle joint of the finger.

If the above points are carefully impressed on beginners, any tendency to bad habits will be eliminated from the commencement and a good style cultivated from the outset of their careers as instrumentalists.

The performer should adopt a nice easy stance, with the head held upright and the elbows away from the sides, thus giving full play to the expansion of the chest. When playing in the sitting position, it is a common tendency to “droop” and sit in a slovenly attitude; this interferes with correct breathing and is decidedly unhealthy, quite apart from the fact that it creates a bad impression on an audience, therefore the Conductor should at all times insist on a correct playing position.

Playing the Instrument.—The next stage in the tuition of the performers should be in the practice of long notes on the easiest part of the instrument, for the purpose of producing a good round tone, this being gradually extended to long notes on the more difficult registers of the instrument.

Following this, exercises in intervals should be given to develop the ear, easy intervals at first, a little more extensive than the examples given on pages 296 and 297.

It is necessary now to point out that from this stage it would be more suitable if tutors for each instrument were obtained.

A modern series of graduated tutors for all wind instruments by the author has been recently published by Messrs. Boosey & Co.

These tutors embody all the above points, with many others too numerous to mention in this work.

From here onwards very easy and graduated exercises in various note values should be attempted, increasing in difficulty as the performer improves. This should be taken in conjunction with the study of major and minor scales. Having reached this stage, unison scales and exercises for the whole of the performers in combination should be practised.

On no account should any of the above scales or exercises be played “*ff*,” but should be kept down to a “*p*” or “*mf*,” then gradually alter the strength of tone “*pp*,” “*p*,” “*mf*,” “*f*.”

Strict adherence to the marks of expression should be insisted upon during the combined practice, also attention should be given to detail and general points of playing.

The scales and exercises should then be played with varying degrees of musical expression, viz., “*pp*,” “*f*,” “*ff*,” “*p*,” etc.

In the original edition of this work there were extensive pictures showing the correct positions for playing the instruments of the Military Band. In this revised edition however, the editors have felt that any series of up-to-date instruction books will carry fine pictures showing the correct posture in playing the various instruments.

Section B

CONDUCTING

The art of conducting may best be described as “to know what you want—and to see that you get it.”

It is a trite saying but a very true one, that conductors are born and not made. It is the conductor who makes or mars his band.

An indifferent bandmaster can easily spoil or turn a really good combination into a mediocre one. On the other hand, a really good bandmaster with that splendid gift, a real musical temperament and possessing dynamic force, can turn a poor band into a very fine one.

For example, a good racehorse ridden by an inferior jockey is beaten by horses of inferior calibre, and the race is lost. On the other hand, a good jockey with the right temperament wins the race on a horse of ordinary capacity.



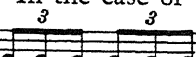
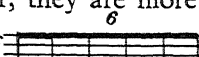
We see all over the country many cases of such mishandling of orchestras and bands by the poor type of conductor.

Now, although we said at the commencement of this chapter that good conductors are born and not made, it is yet possible for musicians without musical temperament to make themselves into a fair semblance of a good conductor by paying far more attention than is usually given at the present time to the following points :—

(1) He should make it his business to attend first-class concert halls where well-known musicians are conducting, and carefully note the way in which they obtain their results :—

- (a) Their general stance, *i.e.*, the way they hold themselves.
- (b) The method of holding the baton, with the flexibility of wrist action shown.
- (c) The different methods of conducting a *legato* or *cantabile* movement of a slow and flowing nature, to that of a quick, strongly rhythmical movement where two entirely different kinds of beat or gesture are given to produce a required result.
- (d) His attention to points of detail should be noted, *i.e.*, strict adherence to marks of expression: the whispering *pianissimos*, his method of producing gradual *crescendos* to big *fortissimos*, and the corresponding *diminuendos* to *pianissimos*, etc.; the strong attacks on big chords

where required, the indication of *staccato* effects as opposed to broad effects, the attention paid to correct value of notes such as dotted crotchets followed by quavers, dotted quavers followed by semiquavers, where the natural tendency is to make the smaller notes at least half as short as they should be. Above all, pauses should be given their correct value, whether silent or played. The incorrect performance of triplets is another sore point, being

more often than not played as follows  instead of  Differentiate between groups of sixes and two groups of threes. In the case of the former, they are more frequently played  instead of 

(2) Another important point is the much abused question of phrasing, which might be better described as grammatical breathing. Most instrumentalists are guilty of breathing in the wrong places. An illustration of bad phrasing in a spoken sentence would be: "Come for a (breath) walk with me." This is obviously wrong, and no educated person worthy of the name would be guilty of such clumsy speech; and yet the same man playing an instrument would do this quite lightly-heartedly in a musical sentence.

The best principle or rule to work upon with the question of phrasing is to instruct the performers to breathe at the points of repose at the end of the second, fourth or eighth bar of phrases or sentences according to the rapidity or slowness of the melody in question.

There are occasions, of course, where through a long note being at the end of such phrases or sentences, or again, through there being no point of repose, more judgment must be used. In which case breathe after the end of the slur, or after a dotted note, or at such points as the conductor's sense of rhythm indicates.

Where songs are arranged as instrumental solos for the purpose of performance, the conductor should always see that the actual words of such songs are written below the music of the solo part concerned, and carefully phrased for breathing.

The question of phrasing has perhaps been unduly stressed, but when it is realized that the difference between a band which invariably phrases correctly and one that does not, is that of a comparison between the speech of a well-educated varsity man and that of an uneducated plough boy, it will be felt that this object cannot have been treated in a less lengthy manner.

(3) Another very important point to be mentioned is, that the great majority of band conductors stand on a small box or rostrum about the size of a small ginger-beer box

Apart from the bad effect from the spectacular point of view, there is nothing more calculated to cramp the style or stance of the conductor.

His legs are fixed rigidly in the same position during the whole of his performance, the effect being stiff and ungainly.

If the performers are sitting down, no rostrum is necessary.

This allows the conductor to move not only his legs gracefully, if necessary, but to move in the direction of any section of the band where he wishes to bring in any entry with emphasis of gesture.

This, incidentally, will give him facility, cultivating a graceful, stylish stance or movement of the body, as there is nothing more irritating to an audience than to see a conductor standing like a mechanical figure, moving his arms monotonously up and down suggesting a man doing semaphore signalling.

If the performers are standing up the conductor should have a rostrum at least three or four feet square.

In the series of illustrations on pages following will be found most of the general faults in style, and the correct method of overcoming them.

Plate 1.—The correct “Ready” position: note the position of the feet, the graceful left hand, and the proper method of holding the baton.

Plate 2.—The correct action of conducting as seen from behind.

Plate 3.—The “Penguin” or “Flapping” action of conducting. Here the arms are moving with the baton, an obviously inelegant style. Do not pump-handle your arms up and down, let your baton do the work.

Plate 4.—A wrong style of conducting, here the legs and trunk are bending with the Down beat, and stretching with the Up beat.

Plate 5.—The correct method of indicating a *crescendo*, the left arm steadily rises from A to B. If the *crescendo* is of long duration the process should be repeated.

Plate 6.—The correct method of indicating a *diminuendo*, the left arm steadily falling from A to B. If the *diminuendo* is of long duration the process should be repeated.

Plate 7.—The Piano swell to Forte and the return to Piano.

Plate 8.—The correct method of holding a Pause, with the “cut off” to the Right.

Plate 9.—An alternative method frequently used of holding a Pause, with the “cut off” to the Left.

Plate 10.—This is an illustration of the cramped style of conducting. The “ginger-beer” box precludes any movement of the legs, the whole body is stiff and unnatural. The wrong type of stand is also being used.

Plate 11.—Here will be seen the result of having a loose handkerchief in the left sleeve. Any quick movement of the arm will cause the handkerchief to become dislodged.

Plate 12.—An incorrect method of conducting. The raising of the Right leg with the Up beat, and lowering with the down beat. The “Stamping” style.

- Plate 13.*—Another incorrect method of conducting. Raising the Right foot on the heel with the Up beat, and lowering with the Down beat.
- Plate 14.*—Four incorrect "Ready" positions. Here it will be seen that all positions are foreign to natural grace and style.
- Plate 15.*—Four incorrect positions of the Left hand.
- Plate 16.*—Ungraceful action of the Left hand. Here will be seen (a) The index finger pointed stiffly. (b) The clenched fist. (c) The "clawed" hand. (d) The "spreadeagled" hand. All of these actions are inelegant.
- Plate 17.*—Here is illustrated the styles adopted by some Conductors. (a) The "Weak knee"—or the right knee permanently bent. (b) The head inclined to the Right. (c) The "Troubadour" style. Right leg bent and the left hand on the hip. (d) The head inclined to the Right with the direction of the baton.
- Plate 18.*—Correct phases of conducting. (a) Bringing in an entry with the Left hand. (b) Indicating a heavy Brass attack. Left hand clenched and well up in full view of the Band (c) Indicating *Pianissimo*. Left hand in line with the hips. (d) Bringing in an entry with the baton.
- Plate 19.*—Correct and incorrect methods of indicating 2nd time Bars. (a) With the baton, or two fingers of the left hand, and not rapping the baton on the stand (b). It is not only likely to damage the baton by striking the stand, but the tapping may not be heard by all, resulting in chaos and a decidedly unmusical effect.
- Plate 20.*—Four positions of a flexible wrist action. Note how the baton is well balanced, and the wrist is supple, akin to a Swan's Neck.
- Plate 21.*—Correct and incorrect positions of the legs. (a) The body is well balanced and feet well apart. (b) The feet are together, resulting in the slightest movement throwing the body out of balance.
- Plate 22.*—The test of a good baton. Note how the baton should balance on the tip of the finger about 2 to 3 inches from the knob. This leaves a good proportion in the hand to keep the baton well balanced when conducting, to produce the graceful "Wavy" action so necessary in *cantabile* or *legato* movements.

The sum of these remarks and illustrations may be condensed to the following main points :

Cultivate a graceful left hand.

Let your baton do most of the work.

Avoid too much use of both arms at the same time—it

unnecessary. Reserve for really big *tutti* effects, and use your left hand instead, for indicating entries and marks of expression.

The left hand is the bugbear of most embryo conductors ; they never know what to do with it.

To attain a style of conducting the student should—after leaving the concert hall where he has been studying the conductor—memorize all the points mentioned, return home as quickly as possible, and try to reproduce the same style and mannerisms in front of a large looking-glass with the score of one of the evening's works in front of him. He will be well repaid for his trouble if he repeats this night after night. It is only by taking such pains that he will avoid acquiring the numerous bad habits already mentioned.

A good position for the conductor's stance should be to have the legs slightly apart and not, as is frequently the case, practically standing to attention. Avoid the troubadour style, *i.e.*, one leg straight and the other with knee bent.

When the conductor mounts the rostrum or, if there is none, stands on the floor to conduct, he should insist on every performer having his instrument ready to commence playing.

Nothing looks worse than the conductor having to wait while his men are leisurely emptying the water out of their instruments or moving he reed about on their clarinets and then coming up at their own sweet will. A well-disciplined band should never be guilty of this.

A well-turned-out band, smart in their appearance and action, tends immeasurably to the enjoyment of the audience ; it would be well here to quote the old saying : that the spectacular effect is nearly as important as the musical effect, as it must be remembered that the audience have nothing else to do but sit in their chairs, and not only listen to the performance, but criticize the appearance of the individuals playing to them.

On the other hand, a slovenly looking band, however well they may play, displeases the audience by their appearance and actions, and fails to give the all-round satisfaction of pleasing both the ear and the eye.

Avoid letting the soloists, when playing, take charge of the band : the conductor must always be the ruling spirit, otherwise in time, as this moral weakness on his part spreads, it comes down to the case of the tail wagging the dog, and instead of having one conductor we have a dozen or more all showing the conductor " how it should go."

A common fallacy with most conductors is to think that without a band of star artists it is impossible to turn out a really good combination. This is entirely erroneous, because it will be found that a band comprised of ordinary enthusiastic instrumentalists with a really good conductor in charge of them, who carries out the dictum laid down in the first sentence of this chapter, can produce a far better performance than a combination of solo performers under a poor conductor. This is

explained by the fact mentioned before, that the star performers always want to show what they are made of, and how much better they are than their next-door neighbour, ignoring the conductor in the process. As a consequence, there is no pulling together and no attention to detail or the wants of the conductor, all sticking out like the teeth of a rake; whereas the other band does exactly what its conductor wants, and pulls together. In other words, we get the finished performance of a combination directed by one will, *i.e.*, that of the conductor, instead of, as in the former case, a combination of scattered elements who cannot possibly see eye to eye with each other as to the way in which a work should be interpreted.

A great mistake made by most young conductors is in giving too wide a beat, thus losing precision. It is not sufficiently realized that quite big results can be achieved by small and judicious means.

For instance, in short *staccato* rhythm, whether in big *tutti*s or otherwise, you can secure the desired effect with the movement of the baton of about 3 to 6 inches, provided it is given with sufficient bite or flicking of the wrist. All too often we see a conductor flapping his arms like a penguin flapping his wings.

Melodies of a broad nature should be indicated by a graceful sweeping motion of the wrist and arm from the shoulder and *not* from the elbow.

Note.—Nothing looks worse than to see the forearm working from the elbow and the baton grasped with all the fingers like a whip, accompanied by a stiff wrist. Keep the baton well up so that it is in full view of all the performers and not merely the front row.

Above all, cultivate a loose wrist, grasping the baton with the tips of the first, second and third fingers and thumb, or with the tip of the second finger and thumb only. The baton should be fairly long and thin, besides being well balanced with a weighted knob at the end, sufficient to allow it to be balanced on the point of a knife about 2 inches from the knob.

A conductor should at all times endeavour, as far as possible, to memorize his score before performance or even before rehearsals, as this has a wonderful bearing on his control of the band. Incidentally, there is no necessity for the conductor to keep his head in his score instead of watching his players.

This brings us to the point that it is a noticeable feature with most conductors, not only young conductors, but of those with long experience who ought to know better, of allowing their bands to run away from the conductor's beat in quick movements, the conductor meekly following, and *vice versa* in slow movements, the band dragging the conductor back. In other words "the tail wagging the dog." The conductor must exercise absolute control and insist on the band following his beat exactly.



PLATE 1

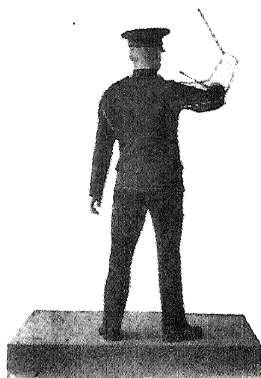


PLATE 2

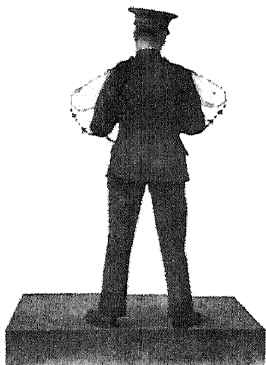


PLATE 3



PLATE 4

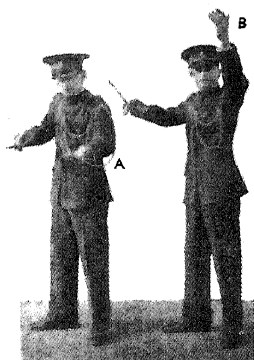


PLATE 5



PLATE 6

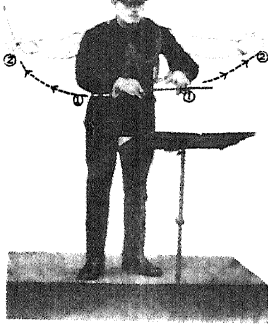


PLATE 7

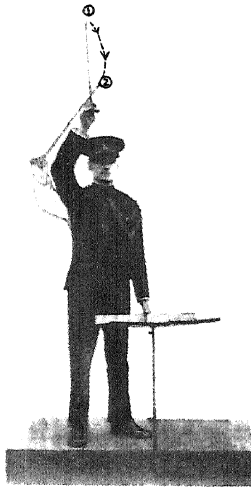


PLATE 8

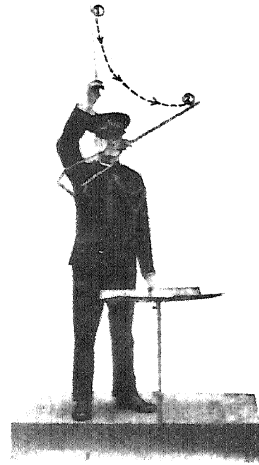


PLATE 9



PLATE 10

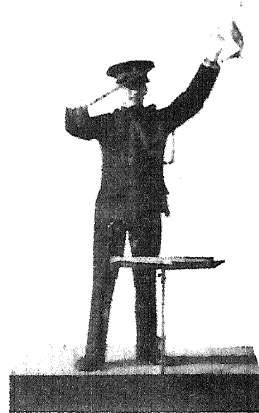


PLATE 11



PLATE 12

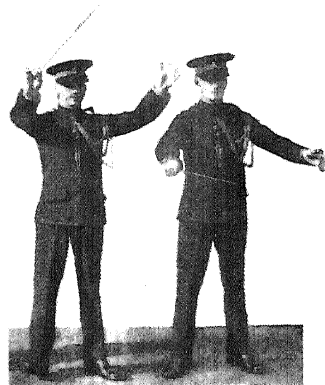


PLATE 13

CONDUCTING

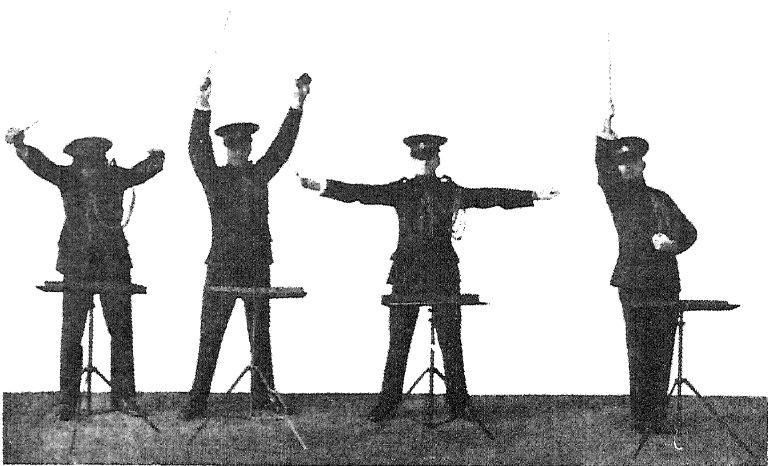


PLATE 14

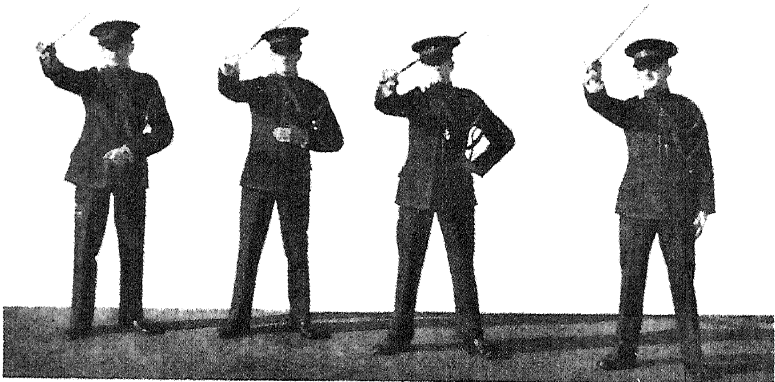


PLATE 15



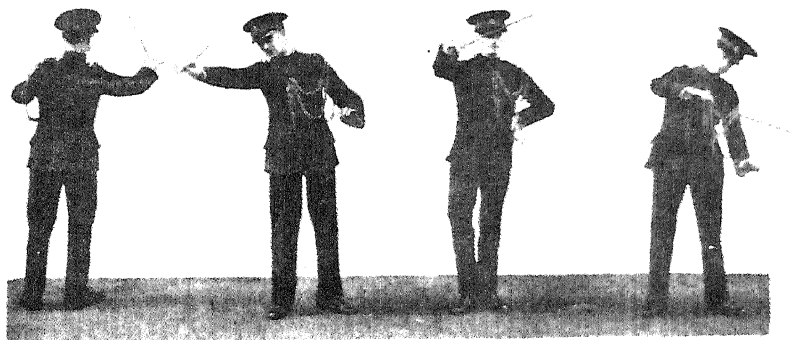
(a)

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PLATE 16



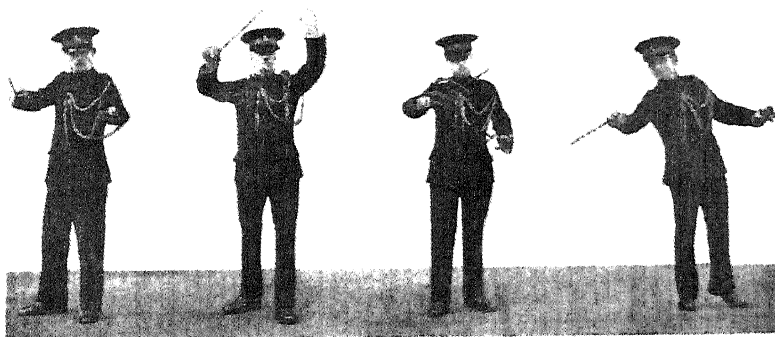
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PLATE 17



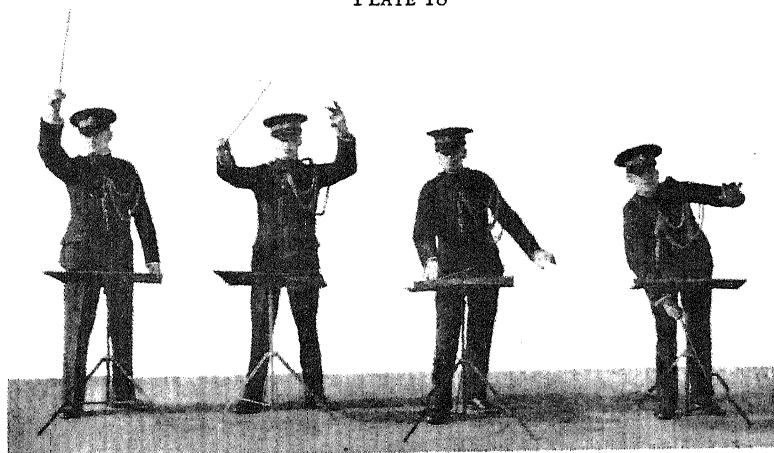
(a)

(b)

(c)

(d)

PLATE 18



(a)

(b)

PLATE 19

CONDUCTING

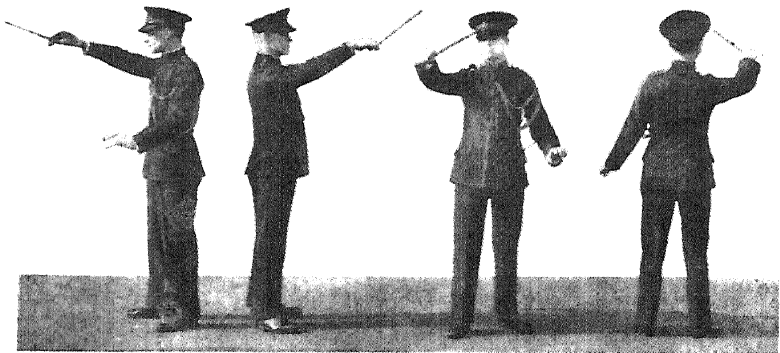
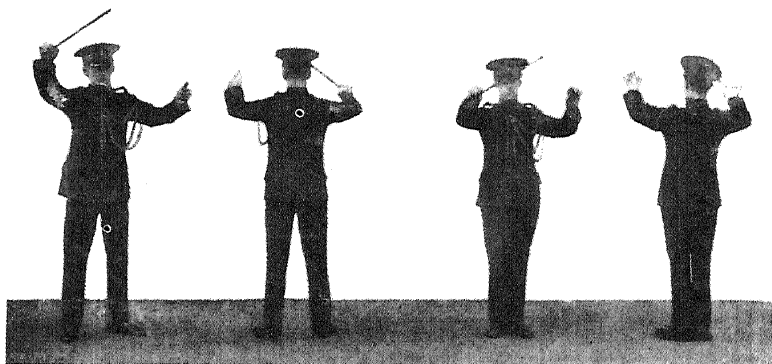


PLATE 20



(a)

PLATE 21

(b)



PLATE 22

INSTRUCTIONS FOR THE CORRECT PLACING OF INSTRUMENTALISTS IN THE MILITARY BAND

The importance of placing correctly the individual instrumentalists in the Military Band cannot be emphasized too strongly, and contributes in no small measure to the general tone and balance of the ensemble. A really good Band can be spoilt completely by lack of attention to this subject, and may sound weak and badly balanced, if the players are placed wrongly in relation to the conductor, and the group of instruments to which they belong.

Many errors in this direction are caused by an unfortunate adherence to precedent, and many Bands have thus retained peculiar positions for their instrumentalists, which are definitely wrong, and detract from the quality of an otherwise good Band. In such a case the Bandmaster should have no scruples about making radical changes in the placing of his musicians, to conform with the experience and teaching of many years, and also, which is more to the point, in obeying the accepted laws of acoustics, with particular regard to the Woodwind and Brass families, which constitute the Military Band.

The above facts are equally applicable to a Marching Band, which should be spaced so as to give the most satisfactory results from every angle, and it should not be necessary for the listener to have to stand in any particular position in order to hear the Band to advantage.

The following chapters give the correct placings for the Military Band of twenty-five performers, in position for programme work, and also for marching purposes, stating the reasons for such placements.

Section C

CHAPTER I

POSITION FOR CONCERT PROGRAMMES

The matter of primary importance in the placing of the various instrumentalists of the Military Band, for the performance of a concert programme, is that of the correct grouping of instruments in their respective families, *i.e.*, the High Reed, (Flute, E \flat Clarinet, and Oboe), the B \flat Clarinets, (1st, 2nd, and 3rd), the Saxophone family, and the Cornets, Trombones and other Brass sections of the Band.

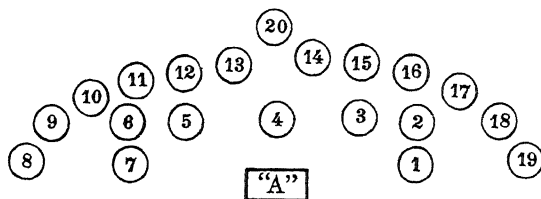
Each group of instruments must then be placed in the best possible relationships with the remainder of the Band, in order to ensure that the correct balance of voices is obtained, and therefore the Military Band can be split up into sections as follows :—

<i>Section.</i>	<i>Instruments.</i>
1. High Reed.	Flute, E \flat Clarinet, and Oboe.
2. B \flat Clarinets.	Solo B \flat Clarinet, and 1st, 2nd and 3rd B \flat Clarinets respectively.
3. Brass.	B \flat Cornets and Trombones.
4. Tenor.	E \flat and B \flat Saxophones, Bassoon and Euphonium.
5. Bass.	Basses.
6. Percussion.	All drums and effects.

It will be obvious to the uninitiated, that in placing the above sections, the more powerful must give way to its weaker brethren, (*see* diagram on page 309), *i.e.*, in the front rank, which should describe a semi-circle, should be placed the instruments of a more delicate character, namely the High Reed and B \flat Clarinets, whilst the Brass, Tenor and Bass sections are placed in the rear, the percussion being behind the whole Band.

The reader may have noticed that no mention has been made of the French Horns, whose qualities have such an important part to play in the composition of the Military Band, and therefore merit special attention. Two French Horns are included in the instrumentation of the Band, (*see* page 121, on the tonal qualities of the Horn), and they blend equally well with Reed and Brass sections, in addition to forming an effective background in certain forms of accompaniment. For this reason they are placed in a central position in the band, and because the instruments are so shaped as to reverse the direction of the sound produced from them, they should be put immediately in front of the percussion, which nullifies to a great extent the effect caused by the fact that their Bells are pointing in the opposite direction from the other instruments of the Band.

CHART OF CORRECT POSITIONS FOR THE PLACING OF INSTRUMENTS IN A MILITARY BAND, WHEN PLAYING FOR CONCERTS

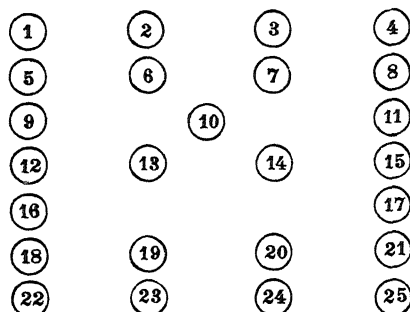


'A'	..	..	..	..	Conductor.
1.	..	..	..	..	Flute.
2.	..	..	..	..	E♭ Clarinet.
3.	..	..	..	..	Oboe.
4.	..	..	..	..	3rd B♭ Clarinet.
5.	..	..	..	..	2nd „
6.	..	..	..	..	1st „
7.	..	..	..	..	Solo „
8.	..	..	..	..	1st B♭ Cornet.
9.	..	..	..	..	2nd „
10.	..	..	..	..	1st Tenor Trombone.
11.	..	..	..	..	2nd „
12.	..	..	..	..	Bass Trombone.
13.	..	..	..	..	1st French Horn.
14.	..	..	..	..	2nd „
15.	..	..	..	..	Basses.
16.	..	..	..	..	Euphonium.
17.	..	..	..	..	Bassoon.
18.	..	..	..	..	B♭ Tenor Saxophone.
19.	..	..	..	..	E♭ Alto Saxophone.
20.	..	..	..	..	Percussion.

N.B.—Where a second Bass Stand is required, it should be placed between the Bass Trombone and the 1st Horn.

POSITION OF VARIOUS INSTRUMENTS, COMPRISING A MARCHING BAND OF 25 PERFORMERS

Front.



Rear.

1.	..	..	..	..	Bass.
2.	..	..	..	..	Horn.
3.	..	..	..	..	Horn.
4.	..	..	..	..	Bass.
5.	..	..	..	..	1st Cornet.
6.	..	..	..	..	1st Cornet.
7.	..	..	..	..	2nd Cornet.
8.	..	..	..	..	Euphonium.
9.	..	..	..	..	Side Drum (The Drummer of the Band).
10.	..	..	..	..	Bass Drum (The Bassoonist of the Band).
11.	..	..	..	..	Cymbals (The Oboeist of the Band).
12.	..	..	..	..	1st Tenor Trombone.
13.	..	..	..	..	2nd Tenor Trombone.
14.	..	..	..	..	Bass Trombone.
15.	..	..	..	..	B \flat Tenor Saxophone.
16.	..	..	..	..	E \flat Alto Saxophone.
17.	..	..	..	..	3rd B \flat Clarinet.
18.	..	..	..	..	1st B \flat Clarinet.
19.	..	..	..	..	2nd B \flat Clarinet.
20.	..	..	..	..	3rd B \flat Clarinet.
21.	..	..	..	..	2nd B \flat Clarinet.
22.	..	..	..	..	Piccolo.
23.	..	..	..	..	E \flat Clarinet.
24.	..	..	..	..	Solo B \flat Clarinet.
25.	..	..	..	..	Solo B \flat Clarinet.

CHAPTER 2

POSITION OF VARIOUS INSTRUMENTS FOR MARCHING PURPOSES

There has been a great deal of controversy on the question of placing the various instruments of the Military Band to their best advantage for marching purposes, and this difference of opinion to a great extent has been caused by the rival specialists of sound and of appearance.

In the majority of cases, stress is placed on the need for appearance, rather than on the quality of sound produced by the band, and the general tone of many Regimental Bands on the march has depreciated accordingly. Bandmasters and Conductors of Military Bands should always endeavour to strike a happy medium, and aim to produce the best possible musical results, without detracting from the appearance of the Band as a spectacle, thereby giving satisfaction from a musical point of view, and also meeting the need for a smart turn-out. The excuse of musicianship should never be accepted to justify the slovenly appearance of a Band on the march.

It may be granted that a front rank of Trombones looks very smart indeed, giving an immediate impression of uniformity, but nobody with a musical ear would contend that the sound of an approaching Band heralded by the Trombones is at all pleasant, to say the least, as they are mostly playing accompaniment.

The Author, therefore, suggests that when on the march, the Trombones should be placed immediately behind the Drum rank, so that their rather forceful tone may be sufficiently blended with the ensemble, and their real musical value exploited.

For the same reason it is suggested that the Piccolo should be placed on the left-hand flank of the Band, so that he will be blowing into the Band instead of away from it.

The Oboe and Bassoon, being double reed instruments, are extremely difficult to play on the march, and furthermore, as the sounds produced by these instruments are of a very delicate and weak nature in the open, it is not recommended that they be used for Marching purposes at all. The players of these two instruments can therefore be utilized in the Drum section of the Band, (*see* Chart on page 310), as the Band of twenty-five performers only allows for one drummer, and here the Oboeist and Bassoonist are turned into a Bass Drummer and Cymbalist respectively. This may not always be possible, as the standard of physique of these players may not be up to the requirements for a Bass drummer.

For the dual reasons of sound and appearance, it is always advisable when a "blank file" is necessary, (as it is in a Band of twenty-five performers), that it should be placed in the centre of the Band. (*See* chart on page 310.)

TUNING

When listening to many bands one wonders why they frequently sound thin and tinny in effect; this is caused very frequently by the instruments being out of tune with each other. We get the same effect in a different degree from a piano which is not in tune. It is similar to a tug-o'-war team not pulling together.

It is essential for the conductor, before commencing a performance, to tune his band thoroughly. First of all, tune the instruments on themselves (*see* page 21, Part I), and then the whole of the instruments to the tuning fork or to one instrument such as an Oboe or Clarinet.

It is not sufficiently realized what havoc a hot day plays with the best-tuned band. The smaller instruments get very sharp, the larger instruments not to such a degree. It is, therefore, imperative that a conductor should keep his ears well open to instruments becoming sharp when playing in the sun.

The next time you hear a tubular bell solo or xylophone solo being played on a hot day it will be easily observed that the bells, etc., are very nearly a semitone flat with the band, producing a most excruciating effect. This is caused by the instruments, already sharp through the hot weather, being further sharpened by the players' hot breath, whereas the percussion instruments are very little affected. The author, therefore, invariably cuts out the bells or xylophone entirely on a hot day, because after all a band performance is supposed to give pleasure, not pain.

Correspondingly, instruments become flat in very cold weather, the larger instruments being more affected; in this case it is necessary, therefore, to see that instruments are not, when taking a long rest, brought up at the eleventh hour to resume playing. Unless this is strictly adhered to they will, as a matter of course, be very flat.

Note.—Players should be compelled to keep their instruments up and to keep them warm when not playing.

Another curious point affecting tuning occurs when the solo cornet player is stationed some way apart from the band to play such solos as the melody of the "Miserere" scene from the selection "Il Trovatore," or the serenade "Sizilietta," etc. The cornet invariably sounds flat with the band, and it is, therefore, advisable to sharpen the former by pushing in the main slide about $\frac{1}{4}$ inch. The soloist should also further keep his instrument well warmed up in addition. To get absolute accuracy, this should be done at rehearsal.

These are very small points in themselves, but have a most important bearing on the perfect performance.

In conclusion, the author is hopeful that this work will be instrumental in guiding the student conductor and future band trainer in the right direction and prevent his feet straying from the path of proficiency in his profession.

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